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# The Index of Refraction of Seawater

Scripps Institution of Oceanography

Prepared For Naval Supply Center

January 1976

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#### THE INDEX OF REFRACTION OF SEAWATER

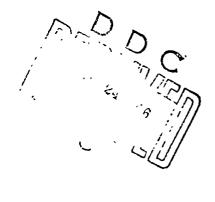
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smoothly varying and internally self-consistent set of tables of the index of refraction of seawater with respect to air are presented. The dependence of the index on salinity (0 to 43%). temperature (0 to 30 °C), wavelength (40°C to 700 nm) and pressure (0 to 1100 kg/cm² gage) has been fully covered. The relevant literature from prior to 1900 through the present has been extensively reviewed. Various comparisons between indices obtained from these sources and the

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tables presented have been performed suggesting an overall accuracy of the tabulated index values of about  $3 \times 10^{-5}$  at atmospheric pressure and  $1 \times 10^{-4}$  at higher pressures. The extreme values encountered were 1.32921 and 1.36844, while the average slopes of the index surface, over the range of the variables considered, are  $\Delta n/\Delta s \approx 0.009/43\%_{\rm sac}$   $\Delta n/\Delta t \approx -0.002/30\%C$ ,  $\Delta n/\Delta t \approx -0.013/300$  nm,  $\Delta n/\Delta p \approx 0.015/1100$  kg/cm<sup>2</sup>. Three dimensional diagrams provide complete views of the index of refraction surface.

The requirements necessary for obtaining salinity and specific gravity directly from measurements of the index of refraction, for oceanographic purposes have been examined.

### PREFACE

Over the past several years the staff of the Visibility Laboratory has had increasingly frequent requirements for information on the index of refraction of seawater at wavelengths, salinities, temperatures, and pressures other than those tabulated in the usual reference sources. In some instances, it was possible by simple linear interpolation to obtain the desired value. In other instances, especially those involving the high pressures found at abyssal depths, the limited data available made such interpolation risky if, indeed, at all possible. Furthermore, it was often necessary to attempt interprintion between the values of different investigators, some of whom performed their measurements or presented their results in a manner which, at least superficially, was incompatible with those provided by others. A rather exhaustive search of the literature, however, failed to uncover any single work which would provide index values spanning the required ranges of the four parameters.

Neither the time nor the resources were available to us for the type of experimental program required to carefully measure the index of refraction of seawater over the range of oceanographic variables and with the type of equipment that is required to obtain accuracies of, say, one digit in the sixth or even fifth decimal place. It was decided instead to composite the necessary information by a careful and thorough analysis and then recombination of the data in the existing literature. Through this procedure it became possible to intercompare the work of various investigators, select the data we felt had the highest credibility and meld it into a single set of index values which would be internally consistent, thereby circumventing the difficulties we had encountered.

A basic premise throughout our analyses was the smoothness of the functional dependence of the index of refraction on the four variables, that is that the function and its derivatives are continuous and monotonic. There seems to be no physical reason to expect the contrary, at least over the range of interest of the variables, and certainly nowhere in the literature — either theoretical or experimental — is it suggested otherwise.

By careful examination of each original data source with respect to assumptions, experimental conditions, accuracy, etc., and by an overall intercomparison of all those works having overlapping parameter values, it was possible to decide to select or reject values to be included in our composite data base. Such decisions, while occasionally seemingly arbitrary, were certainly not capricious and were based on the requirement of obtaining a four-dimensional index surface with no discontinuity or inflections which conforms to our purples on the nature of the surface.

As a consequence of choosing to use only selected sets of an investigator's index values, we must assume full responsibility for any errors in our tabulations which result. Furthermore because of this selective procedure, we felt compelled to check our final refractive index values against the values from other studies to demonstrate the degree of agreement. This we have done in Section 5. Considering the variety of sources and the span of years involved, we were indeed gratified that the agreement was as close as found. Even more important than the absolute agreement or disagreement of the index at particular values of the parameters is the fact that we now possess a single well-behaved body of data from which we may determine the shape of the index surface as a function of the four variables. In this regard the rather remarkable agreement between our values and Rusby's refractive index anomaly leads us to believe that the functional shape of our results, at least over the range of the variables presented by Rusby, is probably significantly better than is implied by the ±0,00003 we have stated as our absolute accuracy for the values of the index at atmospheric pressure.

I wish to acknowledge the very major contributions of co-author, George Halikas, a graduate student at the Scripps Institution of Oceanography, to all phases of this study. Because of his tenacity, capabilities with computer programming, facility with languages and meticulous attention to detail, we were able to turn what was initially to be a modest review of the literature and simple numerical analysis of the available index data into what we believe to be a rather complete and critical summary of all the known works on the subject and what we hope is the best consensus of the index values that can be drawn from these sources.

R. W. Austin, January 1976

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### 1. INTRODUCTION

Historically, much of the interest in the index of refraction of seawater has centered around its potential application of obtaining seawater density. This goal, which was almost obsessive with the earlier oceanographers, appears to have been surpassed by other methods of greater precision and easier application.

Following the rapid development of underwater optical and electro-optical systems, increasing attention has recently been given to the optical properties of the seawater medium, including both its propagative and refractive properties, as factors in the study, design, and evaluation of these systems, their underwater lenses and viewing ports. In the same context, there is an ancillary need to determine the index of refraction of seawater in order to design the submersible measuring instruments required to determine the optical properties of seawater.

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The present study was originally undertaken to survey the past literature and determine the extent of the existing data base. Having established that although sparse, this base was probably adequate to our task, a comparative study was conducted to select those data which showed the greatest internal consistency and reliability, with due attention given to the experimental methods utilized. The selected body of data was subjected to careful interpolation over the parameters salinity, temperature, and pressure, and to interpolation and extrapolation over wavelength.

The result of this work is an internally consistent set of closely interpolated tables of the index of refraction of seawater as a function of wavelength, salinity, temperature, and pressure. There is a fundamental distinction between wavelength and the other three parameters, in that the latter inherently characterize the nature of seawater, whereas the former characterizes the radiation used in determining its properties.

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In all that follows, wavelength will be expressed in nanometers (in air), salinity in per mille (%) following the standard oceanographic usage, temperature in degrees Celsius (°C) and pressure in kilograms force per square centimeter, gage (kgf/cm²), i.e., zero pressure gage is equal to one atmosphere absolute, or 1.0332 kgf/cm² absolute. In this report the more precise notation kilogram force (kgf) will be abbreviated as simply kilogram (kg). The index of refraction will be expressed with respect to air.

The ranges of interest of these parameters are as follows: wavelength 400 to 730 nm, salinity 0 to 43%, temperature 0 to 30%C, and pressure 0 to  $1100 \text{ kg/cm}^2$ . At atmospheric pressure the complete ranges of the other three parameters have been covered, and the index of refraction has been determined to the fifth decimal place ( $3 \times 10^{-5}$ ). At higher pressures however, owing to the need to combine two different sets of data and to the difficulty of conducting high pressure index measurements the accuracy is generally lower, of the order of  $1 \times 10^{-5}$ . In our present work we have made and used the assumption that the dependence of index on salinity is linear for all combinations of the other three parameters, within the ranges specified above. This assumption is suggested by various investigators as will be shown later.

The present analysis will present the index of refraction to five decimal places. The extreme values encountered within the range of parameters considered are 1.32913 to 1.36844. All estimates of error will be expressed in terms of units in the fifth decimal place (10<sup>-5</sup>) throughout, applicable to the least significant digit reported.

Considering the total range of each parameter given above, the index of refraction of seawater is least sensitive to changes in temperature, then salinity, then wavelength, and finally most sensitive to pressure, by the approximate amounts  $-0.002/30^{\circ}$ C,  $+0.009/43\%_{oo}$ , -0.013/300 nm, and +0.015/1100 kg/cm², respectively. These numbers indicate the relative importance of changes in the parameters. A collection of representative values of index and its derivatives is presented in Table 7-1.

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The presentation of the material in this report has been organized as follows: In Section 2 a review of all the important studies on the index of refraction of pure water and seawater are presented in order to familiarize the reader with the relevant literature. Section 3 presents some background information on several physical properties of seawater as used in oceanography, and some useful relationships among the various quantities. In Section 4 the main body of our own work is analyzed, culminating in the choice of the data that are to serve as the basis of the composite tables describing the index of refraction of seawater surface as a function of salinity, temperature, wavelength, and pressure. The results of our work are compared with previous measurements in Section 5 in order to demonstrate the agreement or disagreement and propose explanations for any observed discrepancies. Section 6 is dedicated to the general problem of using the index of refraction as a measure of salinity or specific gravity, and examines the nucessary conditions that must be fulfilled. The manner in which the composite tables that we have constructed are to be used, is described in Section 7 where examples are also given to facilitate their application. Finally, in Appendix A, the actual tables of the index of refraction are presented, together with some throw dimensional pioks of the index surface, that provide a clear view of the functional penavior of the index surface on its four parameters. Appendix 8 simply presents a computer program which we have used in our work.

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The optical index of refraction is usually expressed with respect to air and only rarely with respect to vacuum. In the case of seawater, however, the index has often been expressed as the difference between that of seawater and 35% Copenhagen Standard Seawater (refractive index anomaly).

The index of refraction can be measured by a variety of methods whose accuracy varies over a wide range. Since the index varies over a small range, it is imperative to achieve high accuracy in expressing it to the fifth, sixth, or seventh decimal place. To achieve this, great demands are placed on the optical equipment, the measuring technique, and the experimental controls.

The two-fundamental methods of measurement that can be employed consist of measuring either a refracting angle gonic metrically, or the reduced velocity of light in a medium, interferometrically.

All the goniometric methods are based on Snell's law (n<sub>1</sub> sina<sub>1</sub>= n<sub>2</sub> sina<sub>2</sub>) and one or another of its more fundamental realizations such as the critical angle of refraction. Of the earlier instruments, the Abbe and Pulfrich refractometers were the most successful, both using the critical angle of refraction and providing the value of the index of refraction with respect to air. The Abbe type experienced temperature uncertainities even though it employed a controlled-temperature water jacket, and it was also susceptible to the possibility of sample evaporation in the case of seawater. A different type of instrument is one employing a minimum deviation prism in which the glass-walled prism also serves as the container. Another method used in two of the studies to be mentioned later is that developed by Hallwachs (1933) which employs the same technique as the Pulfrich refractometer but in a two-container arrangement which can provide the index of a liquid relative to another liquid; in the present case the index of seawater relative to pure water. Except for one particular case, these methods are limited to measuring the index of refraction to a few units in the fifth decimal place; the one exception (Tilton and Taylor, 1938) provides it to the sixth decimal place.

All the interferometric methods employ the same technique of beating a reference beam traveling through air against a second beam traversing a liquid sample and counting the fringe shift resulting from introduction of the liquid. Carefully used, these methods are capable of providing the index to a greater accuracy than the goniometric methods. In a variation of the method, the reference beam is made to travel through a reference liquid (e.g., pure water or 35%. Copenhagen Standard Seawater) and the index difference between the two liquids can be obtained even to the seventh decimal place (Rusby, 1967). The interferometric methods were first employed in the 1920's.

In this review of the historical data, we have made a conscious effort to locate all the original sources of index of refraction measurements in order to avoid difficulties arising from reprocessed information published by others at a later time. This also enabled us to examine the methods, the controls, the accuracies, and the omissions of the various investigations. We have, accordingly, omitted references to publications presenting the same data in different form (e.g., interpolated to standard values of the parameters, etc.) even though these were also examined.

The oldest published experimental measurements on the index of refraction of seawater date back to the end of the nineteenth century (Soret and Sarasin, 1389), and over the ensuing years the dependence of the index on temperature, satinity, and wavelength has been sporadically measured. Until 1971 (Stanley), however, no measurements were undertaken to establish its dependence on higher-than-atmospheric pressures, which for occapagnable purposes is an absolute necessity, in order to determine *in situ* value.

In the intervening years various investigators have performed laboratory measurements on seawater samples, but most have done so for only a few values of wavelength, salinity, and temperature. Moreover, many investigators lacked what is today considered to be adequate experimental control, and some even made their measurements on seawater samples which were characterized only by the geographical location where the sample was drawn, and not by the salinity of the sample itself.

Such measurements will be ignored here because of the lack of adequate sample characterization. A more subtle difficulty with the older-measurements is that of refractometer-scale calibration. This problem, also ignored here, is difficult to identify and quantify, and would require judicious choice of the data to be incorporated into a study such as this.

Fortunately, none of the studies undertaken prior to 1934 are necessary for the present purpose, and only recent measurements (after 1968) have been used to construct our tables with the one exception that the values for pure water (salinity 0%) were taken from Tilton and Taylor (1938) either directly or by our sources. The older data will be presented at the very end, for comparison purposes only, using our extensive tables as a reference.

It is, however, interesting to gather here and review the seawater index of refraction measurements if only to show the progress through time. This progress, in a very real sense, paralleled that of temperature measurement and control as well as that of salinity measurement (after overcoming the difficulties in its definition and international standardization). These difficulties do not apply to wavelength since the spectral lines were already well-known and utilized. The advent of the laser, however, greatly facilitated interfer metric methods.

The refractive properties of seawater were first-utilized by Hilgard (1877) as a means togetermine seawater density. Krummel (1894) later devised an instrument for the same purpose, that was calibrated in arbitrary units against density. In both of the above works, the index of refraction was of no interest per se, much in the same way that the coefficient of thermal expansion of mercury is not of interest calibrating a thermometer.

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Soret and Sarasin (1889) were the first to measure the index of refraction of seawater — more perhaps out of curiosity than any real need. They used a seawater of unspecified salinity taken "in the Mediterranean, 4-km-off Nice, in clear blue water. . . a little below the surface" whose index of refraction was measured to 10x 10<sup>-5</sup> at 10 and 20° C for the A, B, C, D, F, h, H solar spectrum lines (759.4, 686.7, 656.3, 569.3, 486.1, 410.2, 396.8 nm, respectively). These measurements are interesting but are of no practical use here, primarily because the sample salinities are unknown.

Subsequently, Tornoe (1900) investigated the possibility of determining salinity by using the index of refraction; interestingly he also examined the same possibility using electrical conductivity in 1893. He used three natural seawater samples and eight more diffuted with pure water to obtain the index for Sodium D-light (589.3 nm) at a range of temperatures using the Halwachs method. Salinity was determined using specific gravity (see Section 3). Since Tornoe was interested in the problem of determining salinity through optical means, he did not present values of the index of refraction per se. These values, however, may be computed using his data and a formula he has presented. Computations using his measurements are presented in Section 5 for comparison with our tables. Interestingly, Tornoe found a nonlinear dependence of index on salinity but as we will show later a linear relationship is equally efficient in describing the same data.

Shortly after Tornoe, Gifford (1906) made measurements of the index of refraction of seawater, on surface samples taken "in blue water, 5 miles south of the Royal Sovereign Lighthouse off the coast at Eastbourne." No salinity was provided, but the index is reported to seven decimal places even though the stated accuracy is only  $10 \times 10^{-5}$ . The omission of salinity determination is unfortunate because the measurements were made at 11 wavelengths from 763.2 to 226.5 nm, including two measurements in the ultraviolet (274.8, 226.5 nm) which have not been attempted since. No use can be made of these data in the present work.

In his Handbuch der Ozeanographie, Krummel (1907) presented a small table of index of refraction at 18°C for the Sodium D-lines (589.3 nm). The salinities range from 0 to 40% every 5%, and the index is reported to the fifth decimal place. His method employed an Abbe refractometer, but no statement is made concerning the method used to measure salinity nor of the estimated accuracy. These measurements are compared to our tables in Section 5.

Vaurabourg (1921a, b) presented measurements of the index of refraction of diluted Mediterranean-seawater samples over the temperature range 0° to 33°C for Sodium D-lines, using a Fery and a Zeiss immersion refractometer. His immediate interest was in obtaining a relationship between the index of refraction and specific gravity so he did not explicitly provide the corresponding sample salinities. They may, however, be obtained from the specific gravity  $\sigma_o$  (see Section 3). The index measurements are stated to be accurate to 5 x 10<sup>-5</sup>. A comparison of these values with our tables is given in Section 5 with the salinities computed using Knudsen's tables (1901),

<sup>&</sup>quot;The definition of salinity was formally established in 1942, Forch, Knudsen and Sorensen (see Section 3).

Pape (1922, 1924) presented a method of determining seawater salinity (up to 8%) using an interferometer (the first time such an instrument was used for the purpose), but provided no index of refraction data. Instead he proceeded to exhaustively describe the calibration and use of a particular instrument of the Deutsche Seewarte (German Hydrographic Office). Thus work is, therefore, of no usefulness to this study.

In their monumental work on seawater Bein, Hirsekorn, and Moller (1935) performed elaborate measurements on the index of refraction of seawater, using both the Hallwachs method and an interferometric method. The first was exploratory, with the purpose of calibrating the second and using it to obtain seawater density directly. Their extensive report is a record of their meticulous and very complicated work, but contains only a small body of numerical data (to be found on their pages 127 and 162) since they developed an analytical expression relating the index to density. Much later, Saint-Guilly (1954) used these measurements to provide interpolated tables, but we disagree with his use of the data as will be shown in Section 5. Bein, et al., characterized their samples through the parameter  $\rho_{17.5}$  (see Section 3) rather than salinity, and we have made the conversion using Knudsen's tables. The remarkable fact about these data is that they are expressed to the sixth decimal place and the stated accuracy is assumed to be equally high. The same authors have also shown that density values obtained interferometrically and through chlorinity differ, suggesting that the two types of measurements are not equivalent. This point will be taken up later.

A significant effort to determine the index of refraction of seawater as a function of temperature and chlorinity was undertaken by Utterback, Thompson, and Thomas (1934) who conducted measurements with an immersion refractometer at one wavelength only (589.3 nm, Sodium D-line pair) on samples of natural seawater diluted to cover a large chlorinity range, with the highest chlorinities apparently obtained from the Mediterranean. No reference to Copenhagen Standard Seawater was made. At each chlorinity, measurements were made at six temperatures (0 to 25°C every 5°C) effectively covering the temperature and chlorinity dependence of index of refraction at that particular and very popular wavelength, at atmospheric pressure. This body of data is of high quality. Even though criticism has been expressed on the use of the pair of Scdium D-lines that are 0.5 nm apart, resulting in decreased resolution, it can be shown that an error of 0.5 nm in wavelength would produce an index error of about 1.8x10<sup>-5</sup> which is within their stated accuracy of 3x10<sup>-5</sup>. For more precise measurements, however, the Sodium D-line doublet is not an optimal choice. These data of Utterback, et al. were the mainstay for over 30 years (up to 1968) and have been reproduced in various publications. For our purposes, the most significant result to come out of Utterback, et al. was the determination that the dependence of the index of refraction on chlorinity (and salinity) is linear, at least up to the typical concentrations (3.5 g/kg) found in the oceans. This is a very fortunate circumstance which has been corroborated by later investigators and which joins a number of similar linear relationships applicable to dilute aqueous solutions (Henry's Law; see Section 4.2 for comments). The slope of this linear dependence, however, is a function of temperature and also of pressure and wavelength. A comparison with our tables is presented in Section 5. Much later, Cox (1965) used the original data of the above investigators to compile a similar but slightly different table; however, we will not be concerned with it here.

A very significant development in index of refraction determinations was the publication by Tilton and Taylor (1938) of the U.S. National Bureau of Standards, of their monumental work on the index of refraction of pure water at a large number of wavelengths and temperatures at atmospheric pressure. Al-

though not directly applicable to seawater, this study (established the index of refraction of pure water to  $1 \times 10^{-6}$ , the highest accuracy ever attained up to the present time using the minimum deviation method, and afforded later experimenters a convenient way to calibrate or recommenters. To achieve this accuracy Tilton and Taylor went to extreme pains to include changes in experimental temperature, pressure, humidity, degree of water purity, and even the dissolution of the prism-container. As an example of the progress in index determinations, their value at 589.3 nm and 20° % is 1.3329877, as compared to 1.33301 used by Utterback, et al. (1934) who did not have the benefit of illon and Taylor's pure water data. The Tilton and Taylor data have been used extensively and will be inferred to again later.

Meanwhile, Miyake (1939) conducted a study of the index of refraction of seawater using a Pulfrich refractometer, with the main emphasis on the refractivities of its ionic constituents and managed to effectively explain the departure of the index of seawater from that of pure water as the sum of the departures of the individual major ionic constituents, Na, K, Mg, Ca, Cl, SO<sub>4</sub>, etc. His values of the index of refraction of seawater, determined at the Sodium D-lines (589.3 nm) and at 25°C, do not appear to be as good as those of Utterback, et al. A comparison is presented in Section 5. The fact that simple additivity of refractivities can, however, account for the index of refraction of seawater corroboutes the linear relationship between index and salinity. Miyake also established that 90 percent of the difference in index between pure water and seawater is due to the chloride ion, which is a significant statement with important implications on the differences between the chloridity and the index methods of determining density, (see Section 3) since the chloride ion contributes only about 55 percent to density.

Saint-Guily (1952, 1954, 1955) examined again the possibility of determining seawater density from the index of refraction using the relations of Bein, et al., and found that densities measured optically and chemically on the same samples showed differences that in all probability were attributable to the different sensitivity of the two methods with respect to composition (see Section 3). He also examined the potential of various interferometric methods in providing accurate measurements of index of refraction. In his 1954 paper, Saint-Guilly used the data of Bein, et al., on the index difference between seawater and pure water for the Helium-yellow line (587.6 nm) and strangely (and erroneously) added them to the pure water data of Tilton and Taylor for the Sodium D-lines (589.3 nm) to obtain the index of seawater with respect to air at 599.3 nm. We strongly object to this misuse of the data, in arbitrarily switching wavelengths, and we have ignored the numerical values he has presented. Bein, et al., never used the Sodium D-lines due to their doublet character.

Velmozhnaya (1960) and Sabinin and Gamutilov (1958) have presented an interferometric method of measuring seawater salinity using the index of refraction. However, as Pape had done almost 40 years earlier, they do not present index of refraction values *per se* but instead only a correspondence of salinity to the number of fringes counted, using a particular instrument (ITR-2). Thus, their study is of no interest for the present purpose.

A second study on the index of pure water, complimenting that of Tilton and Taylor, is that of Waxler, Weir, and Schamp (1994) who measured the index of refraction of pure water at high pressures and at several temperatures and wavelengths. Even though the accuracy is roughly 1 x 10<sup>-4</sup> and some inconsistencies have been found in the data, this work has proven very useful in enabling us to compile the index of refraction tables at high pressures for various salinities, using the linear dependence on salinity. The examination of these data will be presented in Subsection 4.4.

Rusby (1967), in a very carefully designed experiment, undertook extremely precise interferometric measurements (0.04 x 10<sup>-5</sup>) of the index of refraction difference between seawater and Copenhagen Standard Seawater (35%), termed "refractive index anomaly," at the Hg wavelength 546.227 nm (in vacuo). The use of this wavelength is an improvement over the previously more popular Sodium D-line doublet (589.0 and 589.6 nm) for precise work of this type. Rusby's numerous samples were diluted from high-salinity Mediterranean seawater, covering a range 30 to 39%, with salinity determined to a standard deviation of 0.0055%. His results, even though relative to the 35% standard, are extremely useful and are reported to the several decimal place which is, for the inverse problem of determining salinity from the index, comparable to the accuracy of the conductivity method. Rusby determined the relationship between the salinity and the refractive index anomaly at 20°C on a very large number of samples and then proceeded to establish the temperature dependence by obtaining measurements at 17.3, 20.1, 25.3, and 30.1°C on a smaller series of samples. These extensive measurements were fitted to a polynomial, giving the salinity when the refractive index anomaly at this wavelength and the temperature are known.

$$S = 35.000 + 5.3302 \times 10^{3} \Delta n + 2.274 \times 10^{5} \Delta n^{2} + 3.9 \times 10^{6} \Delta n^{3}$$

$$+ 10.59 \Delta n (T-20) + 2.5 \times 10^{2} \Delta n^{2} (T-20)$$
(2.1)

valid within the ranges:

$$-8 \times 10^{-4} < \Delta n < 7 \times 10^{-4}$$
  
 $30.0\%, < S < 38.8\%$   
 $17^{\circ}C < T < 30^{\circ}C$ 

This relationship appears to contradict the linear dependence of index on salinity; but as will be shown later, it provides linear values to the 10<sup>-5</sup> precision between salinities 33%, to 38%. These data will be compared with our tables in Section 5 even though the accuracy of Rusby's values far exceeds that of our own tables. For oceanographic purposes, Rusby's results are applicable at the ocean surface, and it would be desirable to have such extremely accurate determinations extended to lower temperatures and to higher-than-atmospheric pressures. Busby's results have appeared in the UNESCO International Oceanographic Tables (1966a).

Within the past 7 years new and more extensive measurements have been obtained on the index of refraction of seawater — spurred, no doubt, by the recent development of optical equipment used in the extens. The two works in question are by Mehu and Johannin-Gilles (1968) and by Stanley (1971).

The first of these determined the index at atmospheric pressure for 10 wavelengths, 5 chlorinities, and 6 temperatures and is the most extensive and internally consistent body of data available to date. The second determined the index at 35% salinity at 5 wavelengths, but over a large pressure and temperature range and is the only one ever to have included high-pressure index measurements on seawater.

These two bodies of data, together with that of Waxler, Weir, and Schamp mentioned earlier, form the besis for the extensive tables presented in this report and will, therefore, be reviewed and analyzed in greater detail. The Mohu and Johannin-Gilles study (hereinafter M-G) was undertaken through the recommendation of a UNESCO commission in 1962. All their measurements have been conducted at atmospheric pressure for:

Wavelengths: 404.7 (Hg), 435.8 (Hg), 467.8 (Cd), 480.0 (Cd), 508.5 (Cd), 546.1 (Hg), 577.0 (Kr),

'579.1 (Hg), 589.3 (Na), 643.8 (Cd) nanometers,

Temperatures: 1, 5, 10, 15, 20, 25, 30 degrees Celsius, and

Chlorinities: 0, 4.887, 9.603, 14,589, 19.373 parts per thousand .

This forms a sufficiently dense body of data to permit a closely-speced interpolation over the three parameters.

The samples used in the experiment were diluted from Copenhagen Standard Seawater of 19.373% chlorinity (or 34.998% salinity using the proportionality factor 1.80655) with the chlorinity for all the samples determined to five significant digits. Temperature control was within 0.025°C with a corresponding uncertainty in index of 0.5 x 10<sup>-3</sup>. The index of refraction has been obtained with respect to air (not vacuum) and the experimental technique utilized the method of minimum deviation with readings taken goniometrically. The measurements actually obtained were of the difference in index of refraction between a seawater sample and one of twice-distilled pure water. This difference was then added to the index of refraction of pure water to obtain the desired result. Some of these pure water values (at 589.3, 577.0, 546.1, 435.8, and 404.7 nm) were taken directly from Tilton and Taylor, while at the other five wavelengths they were determined by the authors and are judged by us to be consistent. M-G also maintain that the index of refraction of seawater depends linearly on salinity, but their salinity dependence contains some systematic deviations at all wavelengths and has been dealt with as described in Subsection 4.2. Additional comments are to be found in Section 5.

The Stanley data provide the pressure dependence necessary for extending the tables to this fourth parameter. Stanley conducted interferometric measurements of the index of refraction of Copenhagen Standard Seawater of 35% salinity at four pressures (352, 703, 1055, and 1406 kg/cm² gage), three temperatures (0.03, 15.02, and 29.98°C), and five wavelengths (457.9, 488.0, 501.7, 514.5, and 632.8 nm). Unfortunately, he did not vary salinity, necessitating the use of the Waxler, et al. data for this purpose. He did, however, measure the index of pure water at the same pressures and temperatures, but only at 632.8 nm. Temperature centrel was maintained to within ±0.01°C, salinity to within ±0.10% (only positive due to evaporation) and pressure to within ±1.4 kg/cm², with corresponding errors in the index of about ±0.075×10-5, +2.0×10-5, and ±2.0×10-5, respectively. The temperature dependent error is trivial, but the two other errors are significant. Stanley states a total experimental error of ±6×10-5. The method he employed involved an interferometer, so the actual quantity measured was the number of fringes, which was converted into an index of refraction difference at high pressures from that at atmospheric pressure.

3

This difference in index was added to the value at atmospheric pressure (after applying a small correction for vessel expension) to obtain the index at high pressures. In our presentation of these results, we have used only the fringe counts (original data) and have completely ignored the actual absolute index of refraction that was computed. The reasons for this will be explained in Subsection 4.3. The Stanley data comprise the only set for higher than atmospheric pressures for seawater and cannot, therefore, be compared to any others for accuracy and quality.

In summery, the best available data of the index of refraction of pure water at atmospheric pressure are generally accepted to be those of Tilton and Taylor (1938), and at higher pressures, those of Waxler. Weir, and Schamp (1964). For seawater, the most comprehensive measurements are by Mehu and Johannin-Gilles (1968) at atmospheric pressure and by Stanley (1977) at higher pressures. These four data sets form the basis of our tables, but the data of Rusby (1966) and of Utterback, Thompson, and Thomas (1934) will be used for comparisons and determination of accuracy in Section 5.

# 3. SOME REMARKS ON THE CHLORINITY, SALINITY, DENSITY AND SPECIFIC GRAVITY AS RELATED TO THE INDEX OF REFRACTION

In the present study our immediate interest is in considering the relationship between chlorinity and salinity, since several studies of the index of refraction have characterized the seawater samples by either one or the other of these quantities. We are only interested in the density in a different sense; namely, in converting some of the older data from density to salinity for comparison with our values and, in a more general sense, in using the index of refraction to measure it. In oceanography the usual parameter characterizing density is not density itself but specific gravity, a dimensionless quantity which is the ratio of the density of a seawater sample at some temperature to the density of pure water at 4°C. If this density of pure water is taken by definition as equal to 1.0 g/cm³, then the density (g/cm³) and the specific gravity (dimensionless) are numerically equal. Originally, the gram was defined as the weight of a cubic centimeter of pure water at 4 degrees. Celsius. The gram has since been redefined as being one-thousandth the mass of the standard kilogram kept at the Bureau International des Puds et Mesures. This latter definition constitutes an increment of 0.003 percent over the former, so present-day specific gravity differs numerically from density by this amount. The older literature used density and specific gravity interchangeably, with density being the preferred term.

The specific gravity is, perhaps, the most well studied property of seawater due to its direct applicability to the study of ocean currents. The literature concerning it is about as old as oceanography-itself, dating perhaps to before the 1870's, and its study has been continued up to the present time. The reason for this is that, as is the case with so many other oceanographic measurements, it cannot be measured in siturnar can it be measured on shipboard, since the method to be employed requires very delicate weighing. In order to circumvent its direct measurement, one must conduct separate measurements of temperature, "salt content," and pressure and compute the specific gravity from empirical experimental relationships established in an on-shore laboratory. This is necessary because no satisfactory analytical expression deriving from theory has been developed for the equation of state of seawater. (See, however,

The state of the s

Fisher, Williams, and Dial, 1970. With the progress of time, measurements of temperature and pressure have become increasingly more convenient, precise, and accurate. However, measurement of the "total salt" content is not as direct and has had an erratic history. Ever since Dittmer (1884) found that the composition of section almost constant, implying that the ratios of dissolved ion concentrations are also almost constant. See Carritt and Carpenter, 1959), it has occurred to oceanographers that by measuring only one ionic constituent of seawater and knowing these almost-constant ratios, it would be possible to arrive at the other ionic constituents and, therefore, at the total salt-content. Using this the dansity (specific gravity) could be obtained when the temperature and pressure are known. The chloride ion was chosen to be this single constituent since it can be very accurate. Carrated into AgCl. The other halides. Br and I are also included in providing the chlorinity, from which the salinity is obtained.

The most accurate present-day measurements of the specific gravity of seawater (Cox, McCartney, and Culkin, 1970) necessivate knowledge of the salinity to five significant digits, e.g., 34.982%. (34.982 g/kg). This means that any constituent contributing more than .0001 percent by weight should be accounted for, i.e., all constituents above the part-per-million range. The major ionic components of seawater are given below in Table 3-1, together with their partial contributions to the index of refraction (Miyake, 1939) and to the approximate specific gravity increments over the corresponding values for pure water. The contributions to specific gravity are only approximate, and the numbers actually represent the percentage contributions in g/kg to 35% (g/kg) seawater. To obtain values on a volume basis the volume changes and the temperature must be taken into account.

Table 3-1. The percentage contribution of the major ionic constituents of  $35\%_0$  seawater, to the change in index of refraction  $\Delta n$  and specific gravity  $\Delta p$  over the corresponding values of pure water.

	Δn %	Δ <i>ρ</i> (approx.) %
CI	90.54	55.04
Na	1.71	30.61
SO <sub>4</sub>	7.59	7.68
Mg	-1.60	3.69
Ca	1.37	1.16
K	0.39	1.10

NOTE:  $\Delta n$  taken from Miyake (1939).  $\Delta p$  is approximate. It actually represents the increase by weight rather than volume. The negative contribution of Mg to  $\Delta n$  is noteworthy.

It is interesting to note that the ionic components do not contribute equally to specific gravity and index. Thus, one expects that a one-to-one correspondence could be established only if the seawater composition is truly constant. It was a consideration such as this that prompted Carritt and Carpenter (1959) to state that the measures of chlorinity, salinity, density (or specific gravity), conductivity, and index of refrection are not necessarily in a one-to-one relationship.

Historically, Forch, Knudson, and Screnson (1902) first presented a formal definition of salinity -

"Salinity is defined as foll ws: The weight of dissolved solid material found in 1 kilo of seawater, after all the bromine has been replaced by an equivalent quantity of chlorino, all the carbonate converted to oxide, and all the organic matter destroyed," (from Carritt and Carpenter, 1969)

— with the implicit assumption that the composition of seawater is constant. They measured the specific gravity of seawater samples and related it to the salinity, temperature, and precause. The results of this work led to the famous Knudsen Hydrographic Tables, (Knudsen, 1901), for obtaining the specific gravity of soawater. During this work, independent determinations of the salinity and the chlorinity (defined as "The total amount of chlorine, bronline, and indire in grams contained in 1 kilogram of water, assuming that the bromine and indire have been replaced by chlorine") were made and an empirical relationship was established between the two; i.e.,

$$5\% = 0.030 + 1.8050 \text{ Cl}\%$$
 (3.1)

This relationship has been termed the *Knudsen relation* and has held for about 50 years almost without challenge. However, Carritt and Carpenter (1959) have shown that a better fit to the same data is:

$$S\%_0 = 0.0313 + 1.80488 \text{ Cl}\%_0$$
 (3.2)

which, however, would be modified to:

$$S\%_{00} = 0.0078 + 1.8060 \text{ Ci}\%_{00} \tag{3.3}$$

if the "atypical" Baltic and North Sea samples that were used in the original determinations were excluded. For a chlorinity of 19% the above three relations give S = 34.325%, 34.323%, and 34.322%, while for CI = 5% the salinities are S = 9.055%, 9.056%, and 9.038%, respectively.

The above relations are essentially equivalent for normal oceanic salinities (~35%), but they do differ at the lower salinities as shown in the above example, making evident the unwarranted weighting of the lower salinities by the North Sea and Baltic samples whose composition is cortainly different. Such differences were not, however, important before the 1940's since the routine methods of notesturement at that time could not achieve the necessary accuracy. It should be noted that the "total sait" content of seawater is about 0.45 percent greater than its salinity as defined by Knudsen (See Riley and Chester, 1971, p. 13).

It is important to note that the primary measure of salinity was at that time based on chlorinity and the Knudzen relation, and Standard Seewater was specified through its chlorinity.

in 1940, the definition of chlorinity was recest (Jecobsen and Knudsen, 1940) in order to divorce it from its dependence on the atomic weight values and was expressed in the following form:

"The number giving the chlorinity in per mille of a seawater sample is by definition identical with the number giving the mass with unit gram of 'Atomgewicht silber' just necessary to precipitate the halogens in 0.3295234 kilogram of the seawater sample."

'Atomgewicht silber' means atomic weight silver, a very pure form of silver. This definition ensured continuity of the pre-1340 measurements of chilorinity, and was established empirically by comparison of the new Standard Seawater "Urnormal 1937" with the 21 previously prepared batches of Standard Seawater over the period 1900—1937. Again the implication was that the composition of seawater was constant. The Knudsen relation between chlorinity and salinity continued to be used and the Knudsen tables provided the means of obtaining specific gravity.

In the 1950's, this well established state of affairs was reexamined and it was found, (Carritt and Carpenter 1959), that by specifying chlorinity exactly, the salinity could only be established to within  $\pm 0.024\%$ , at the 99 percent confidence level, using the data on which the Knudsen relationship was based. This led to some previously overlooked uncertainties concerning seawater composition which were actually pointed out by Dittmar (1889) himself. It was more recently found that deep waters have a proportionately higher calcium content than surface waters, a fact which had not been taken into account previously since the samples used did not include deep water. It was also found that the amount of dissolved gases and changes in isotopic composition of water that could not be detected by measuring chlorinity could contribute to small variations in density, leading to situations where two samples of the same chlorinity, but varying in the above quantities, have different salinities and densities. These latter differences, however, are only barely above the threshold of present-day measurement capabilities.

Discrepancies between chlorinity, specific gravity and index values were also found to occur by Bein, et al. (1935) who used a calibrated interferometer to obtain specific gravity and who also made independent determinations of chlorinity. Thompson and Wirth (1931) also found discrepancies of this type, implying that the Knudsen Hydrographic Tables were actually slightly low in specific gravity.

After Carritt and Carpenter generated new interest in this problem, Cox (1963) discussed the "salinity problem" and described the relatively new conductimetric methods used for its measurement. Cox, Culkin and Riley (1966) presented a much more refined chlorinity-to-electrical-conductivity relationship, using Copenhagen Standard Seawater. More recent work by Cox, McCartney and Culkin (1970) established a new relationship between specific gravity, salinity and temperature. From the above works of Cox and his colleagues at the National Institute of Oceanography, a new relationship between salinity and chlorinity was established,

$$S\%_0 = 1.89655 \text{ Cl}\%_0$$
 (3.4)

as described in UNESCO (1966b), which for Cl = 19% and 5% gives S = 34.325% and 9.033% respectively (Compare with relations 3.1, 3.2, 3.3).

This relationship we intend to use in the present study to obtain the correspondence of S and CI; for the more recent experimental works on the index of refraction, and specifically the Mehu and Johannin-Gillés (1988) data.

A slight-modification will be necessary to convert pre-1940 chlorinities to salinities due to the change in atomic weights as pointed out by Reeburgh (1966) and the relationship becomes

$$S\%_{00} = \frac{1.80655}{1.00045} C1\%_{0}$$
 (3.5)

which will specifically be used to convert the Utterback, et al. data.

The difference between the last two formulae for a CI of  $19\%_0$  would produce  $S = 34.324\%_0$  and  $S = 34.309\%_0$  which is not insignificant and has led to erroneous conclusions in the past.

Such differences become important when accuracies at and beyond the fifth decimal place in index of refraction are confidered.

Recently, with the advances of conductimetric methods of measuring salinity, a new definition has been adopted for salinity which uses the conductivity ratio of a seawater sample to that of pure water, both at 15°C (UNESCO, 1966b). In addition, Copenhagen Standard Seawater is now labeled with both its chlorinity and its conductivity ratio.

A general observation applicable to almost all the experimental works that were reviewed in this study refers to the methods of obtaining the various seawater samples to cover a range of salinities. One very popular method is to begin with Copenhagen Standard Seawater (~35%) and through dilution with multiply-distilled fresh water, to obtain samples at other salinities. This method is restricted, of course, to salinities below 35% and the ionic and isotopic composition of the fresh water used may be important. Some investigators have obtained higher salinities by permitting evaporation of their samples, which is a questionable practice. Another method is to begin with high-salinity seawater (e.g., from the Mediterranean) and follow the above procedure of dilution to obtain salinities above 35%. A third and, in our opinion a more correct method, is to mix actual seawater samples of different salinities to obtain intermediate values. It is very probable that the above procedures encounter difficulties with respect to modification of the ionic composition, which are usually ignored. It is, nevertheless, an important point, when comparisons between different methods—e.g., conductimetric versus optical—are made in achieving the same goal, i.e., salinity determination. In relation to this, it is instructive to recall that investigators measuring pure water properties are chiefly concerned with its purity; whereas, in the case of seawater, this is an academic question.

In the present work the accuracy of the index of refraction provided in our tables is not sufficient to probe any such fine distinctions, but in Section 6 some thoughts on the subject and some estimates of the mecessary accuracy will be offered.

In oceanographic usage, the density is expressed as specific gravity  $\rho$  (s,t,p) and is customarily used in an abreviated form expressed as  $\sigma_{a,t,p}$  where

$$\sigma_{s,t,p} = [\rho(s,t,p)-1] \times 10^3$$
 (3.6)

Thus for p(s,t,p) = 1.02478, we have  $\sigma_{s,t,p} = 24.78$ . It is also often useful to express this form of specific gravity, referred to atmospheric pressure, and call this term sigma—t  $(\sigma_s)$ 

$$\sigma_{\rm t} = [(\rho(s,t,0)-1] \times 10^3$$
 (3.7)

When, in addition, a direct correspondence of specific gravity with salinity is desired, the temperature must be fixed, and  $0^{\circ}$ C has been chosen for this purpose, providing another variant, sigma-zero ( $\sigma_0$ )

$$\sigma_0 = [(\rho(s,0,0)-1] \times 10^3 . \tag{3.8}$$

In the older works, Knudsen (1901), Bein, et al. (1935), a parameter characterizing density was  $\rho_{17.5}$ , defined as

$$\rho_{17.5} = \left[ \frac{S_{s,w(17.5)}}{S_{s,w(17.5)}} \right] - 1 \times 10^3$$
 (3.9)

where  $S_{a,w(17.5)}$  is the specific gravity of seawater at 17.5°C (referred to distilled water at 4°C), and  $S_{p,w(17.5)}$  similarly for pure water. Specific gravity is not to be confused with specific weight which is the product of the density of seawater and the acceleration of gravity g. Since Bein, et al., use this expression (Eq. 3.9), we have used Knudsen's Tables which provide the correspondence between Ci, S,  $\sigma_0$ , and  $\rho_{17.5}$  to convert to salinity. The above relations should be kept in mind for some of the data we will consider later.

Most of the modern work on oceanographic standards and relationships between the various quantities can be found in a series of reports of the Joint Panel on Oceanographic Tables and Standards published by UNESCO, one of which is listed in the References at the end of this report.

# 4. THE INDEX OF REFRACTION OF SEAWATER

The index of refraction of seawater may generally be considered to be a function of the salinity s, temperature T, pressure P, and wavelength  $\lambda$ .

The natural ranges over which these variables extend are:  $0 < S < 43\%_{00}$ , 0 < T < 30°C, 0 < F < 1100 Kg/cm<sup>2.\*</sup> These are the relevant ranges of the parameters from the oceanographic point of view. The wavelength range of interest is  $400 < \lambda < 700$  nm (i.e., the visible spectrum). In the oceans, however, not all combinations of these values are realized. As a matter of fact, most oceanic waters have very well defined characteristic temperature versus salinity correlations which are used to distinguish between different water masses. It also happens that the deep waters (high pressures) are always found to have low temperatures (except in the Moditerranean and the Red Sea), although the reverse is not true since there exist cold surface waters at high latitudes.

The coverage presented in our tables, however, is not restricted to oceanic conditions but includes the complete ranges given above. Our final results are gathered in Appendix A as Tables A-1 through A-6 where representative three-dimensional plots are also provided as Figures A-1 through A-6.

All index values are expressed with respect to air.

#### 4.1 THE DATA BASE

As mentioned in the literature review, four bodies of data form the basis of our tables: the one by Mehu and Johannin-Gilles (1968), (hereinafter M-G), providing the dependence of index of refraction of seawater on temperature, chlorinity (salinity), and wavelength at atmospheric pressure, the one by Stanlay (1971) providing the dependence on temperature, pressure and wavelength at 35%, salinity, the one by Tilton and Taylor (1938) providing the index of pure water as a function of wavelength and temperature at atmospheric pressure, and the one by Waxler, Weir and Schamp (1964) providing the dependence on temperature, pressure and wavelength for pure water. In Section 5 the works of Utterbeck, Thompson-and Thomas (1934) and of Rusby (1966) will be compared with our results within the restricted ranges of the parameters they provide, even though Rusby's refractive index anomaly data are numerically the most accurate.

<sup>\*</sup> Pressure is taken as gage pressure, i.e., atmospheric pressure is zero gage pressure.

# 4.2 THE DEPENDENCE OF INDEX ON TEMPERATURE, SALINITY, AND WAVELENGTH

The M-G data are presented in their original form in Table 4-1 and include 10 wavelengths, 5 chlorinities, and 7 well-spaced temperatures (the salinities have been computed, see Section 3). From such a table one may, by suitable interpolation and some extrapolation, obtain much more expanded tables of the index of refraction of seawater, provided the data are well behaved. The connotation here, for example, is that no systematic errors occur for some value of one parameter and that the random errors are smaller than the claimed accuracy, which is "within"  $3 \times 10^{-5}$ . As mentioned in the introduction, the intent is to examine the data using various objective tests and some judgement and to produce the most credible set of values covering all four parameters. With this in mind, the M-G data were examined, and several systematic discrepancies were noted. Figure 4-1 shows the plot for  $\lambda = 546.1$  nm, which apart from the actual numerical values of index is an example identical to the plots for all the other wavelengths.

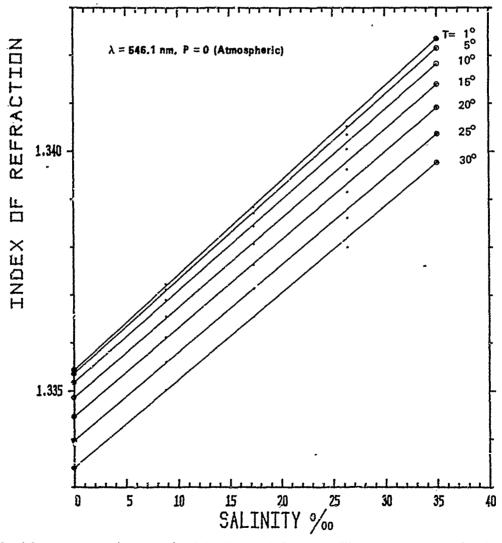


Fig. 4-1. Representative example of the Mehu and Johannin-Gilles data, demonstrating the departture from a linear dependence of the index on salinity.

Digressing briefly, it is recalled that except for Tornoe (1900) (see also Section 5), all investigators who determined the index of refraction dependence on salinity (to an accuracy of the order of 10<sup>-5</sup>) have claimed it to be linear. M-G make the same claim and have fitted straight lines to their data using least squares. In the example in Figure 4-1, we have connected the lowest and highest salinities by straight lines, for reasons to be described later. It is observed that at the chlorinity value 14.588% (S=26.354%) the data fall below the line for all temperatures, while at 4.887% (S=8.829%) they fall slightly above it with smaller departures for the higher temperatures. At the middle chlorinity value of 9.603% (S = 17.348%, they appear to be on the line-except at the lower temperatures. This behavior is identical at each of the 10 wavelength, and the departures are of almost exactly the same magnitude (<20 x 10<sup>-5</sup>). These discrepancies do not appear to be randomly produced (see Table 5-5), but instead indicate some systematic cause, which is almost impossible to trace since the authors' report is quite brief. Of all the possible causes of error - temperature, salinity, goniometer readings, handling of the samples, etc. - we may eliminate several as improbable. First, five of the pure water values (at 404.7, 435.8, 546.1, 577.0, and 589.3 nanometers) have been taken directly from Tilton and Taylor and their quality is unquestionable; the other five were determined by the authors themselves and appear to be consistent. Second, at 19.373%, (5 - 34.998%), we have faith in the chlorinity values since they were very precisely determined during the standardization process in Copenhagen. Finally, we expect from previous studies that the dependence of index on chlorinity (and salinity) is linear. Observing that the authors claim a temperature control of 0.025°C, corresponding to the trivial uncertainty of about 0.15x10<sup>-5</sup> in index, it appears that temperature errors can be excluded also. The remaining probable causes are either erroneous chlorinity determinations for the diluted samples or a systematic error in the goniometer and apparatus (whose limit of resolution was 3x 10<sup>-5</sup>, which is also the error the authors quote for their work). Surprisingly, no mention is made by the authors of their chlorinity measurements, the measurement method used, or the accuracy of the determinations, although they report them to five significant digits.

We did not contemplate locating these errors or correcting for them; instead, we have eliminated values which appeared to be inconsistent. Our principal objection lies in the lack of linearity of the data, beyond the stated  $3 \times 10^{-5}$  accuracy, and also in the sigmoid shape of the curves that would result which is inconsistent with the authors' claim that the functional dependence is linear. For further comments, see-Section 5.

In view of the above objections, we have selected from the M-G data of Table 4-1 only those values that correspond to pure water (S = 0%) and Copenhagen Standard Seawater (S = 34.998%) in which we have more faith. The straight lines are drawn through these two salinities in Figure 4-1, and are circled for clarity. The abridged body of data upon which we base our Tables A-1 through A-4 in Appendix A, is given in Table 4-2. Chlorinity has been converted to salinity, using the proportionality factor 1.80655 (see Section 3).

Admittedly, in systematically eliminating some of the original data, we have relied heavily upon the assumption of linearity of index with salinity. We believe from previous studies (except Tornoe, see Section 5), that this linearity is accurate at least to the fifth decimal place. This almost arbitrary choice of the data to be retained is later justified through comparison with the data of Utterback, et al., Section 5.

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Table 4-1. Original Mehu and Johannin-Gilles (1968) data. The salinities have been computed.

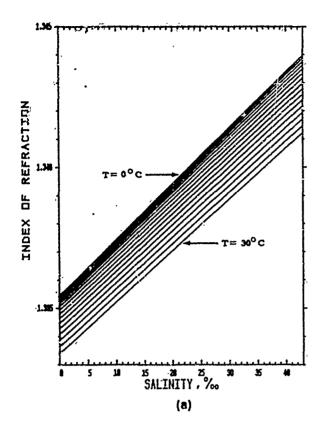
				<del></del>	τ	SHUTARE O	· · · · · · · · · · · · · · · · · · ·	<del></del>	
, <del>```</del> ;	(1/40)	ශ්ර ලෝංද,	1.0	5.0	10.0	15.0	20.0	25.0	30.0
404.7	0.0	0.0	1.34375	1.34368	1.34348	1.34316	1.34274	1.34224	1.34166
	8.829	4.887	1.34563	1.34552	1.34528	1.34493	1.34448	1.34395	1.34335
	17.348	9.603	1.34722	1.34710	1.34685	1.34650	1.34607	1.34556	1.34497
	26.354	14.588	1.34903	1.34887	1.34856	1.34814	1.34763	1.34706	1.34643
	34.998	19.373	1.35093	1.35072	1.35040	1.34999	1.34950	1.34894	1.34831
435.8	0.0	0.0	1.34121	1.34114	1.34094	1.34062	1.34021	1.33971	1.33913
	8.829	4.887	1.34306	1.34295	1.34271	1.34236	1.34192	1.34139	1.34078
	17.348	9.603	1.34465	1.34454	1.34428	1.34392	1.34349	1.34298	1.34239
	26.354	14.588	1.34643	1.34626	1.34595	1.34553	1.34504	1.34447	1.34385
	34.998	19.373	1.34831	1.34811	1.34778	1.34736	1.34688	1.34632	1.34569
467.8	0.0 8.829 17.348 26.354 34.998	0.0 4.887 9.603 14.588 19.373	1.33913- 1.34096 1.34254 1.34429 1.34615	1.33906 1.34085 1.34244 1.34412 1.34596	1.33886 1.34061 1.34217 1.34381 1.34563	1.33854 1.34026 1.34180 1.34339 1.34520	1.33813 1.33982 1.34136 1.34291 1.34471	1.33764 1.33930 1.34085 1.34235	1.33706 1.33869 1.34027 1.34173 1.34355
480.0	0.0	0.0	1.33844	1.33837	1.33817	1.33786	1.33745	1.33695	1.33638
	8.829	4.887	1.34026	1.34015	1.33991	1.33957	1.33913	1.33860	1.33800
	17.348	9.603	1.34185	1.34173	1.34147	1.34111	1.34067	1.34016	1.33958
	26.354	14.588	1.34359	1.34341	1.34310	1.34270	1.34221	1.34165	1.34104
	34.998	19.373	1.34544	1.34525	1.34492	1.34450	1.34401	1.34345	1.34294
508.5	0.0	0.0	1.33701	1.33694	1.33674	1.33644	1.33603	1.33554	1.33497
	8.829	4.887	1.33881	1.33871	1.33847	1.33814	1.33770	1.33718	1.33659
	17.348	9.603	1.34041	1.34029	1.34002	1.33966	1.33922	1.33872	1.33814
	26.354	14.588	1.34212	1.34195	1.34163	1.34124	1.34075	1.34020	1.33959
	34.998	19.373	1.34397	1.34378	1.34344	1.34302	1.34253	1.34199	1.34138
546.1	0.0	0.0	1.33544	1.33537	1.33518	1.33487	1.33447	1.33398	1.33341
	8.829	4.887	1.33723	1.33712	1.33690	1.33655	1.33612	1.33561	1.33502
	17.348	9.603	1.33884	1.33871	1.33844	1.33807	1.33764	1.33714	1.33656
	26.354	14.588	1.34052	1.34034	1.34004	1.33962	1.33915	1.33851	1.33800
	34.998	19.373	1.3423>	1.34215	1.34183	1.34140	1.34092	1.34037	1.33977
577.0	0.0	0.0	1.33434	1.33428	1.33408	1.33378	1.33338	1.33289	1.33233
	8.829	4.887	1.33612	1.33603	1.33579	1.33545	1.33502	1.33451	1.33393
	17.348	9.603	1.33773	1.33762	1.32734	1.35698	1.33653	1.33602	1.33547
	26.354	14.588	1.33939	1.33922	1.33891	1.33850	1.33803	1.33749	1.33689
	34.998	19.373	1.34122	1.34104	1.34070	1.34028	1.33979	1.33924	1.33865
579.1	0.0	0.0	1.33427	1.33421	1.33402	1.33371	1.33331	1.33282	1.33226
	8.829	4.887	1.33605	1.33596	1.33573	1.33538	1.33495	1.33444	1.33386
	17.348	9.603	1.33766	1.33755	1.53728	1.33691	1.33646	1.33595	1.33540
	26.354	14.588	1.33932	1.33915	1.33885	1.33843	1.33796	1.33742	1.33682
	34.998	19.373	1.34115	1.34097	1.34064	1.34021	1.33972	1.33917	1.33858
589.3	0.0	0:0	1.33395	1.33388	1.33369	1.33339	1.33299	1.33250	1.33194
	5.829	4.887	1.33573	1.33563	1.33540	1.33506	1.33463	1.33412	1.33354
	17.348	9.603	1.33734	1.33722	1.33695	1.33658	1.33614	1.33563	1.33507
	26.354	14.588	1.33899	1.33661	1.33851	1.33810	1.33763	1.33709	1.33649
	34.998	19.373	1.34081	1.34063	1.34630	1.33987	1.33938	1.33883	1.33824
643.8	0.0 8.829 17.348 26.354 34.998	0.0 4.887 9.603 14.588 19.373	1.33241 1.33419 1.33580 1.33742 1.33924	1.33408 1.33566 1.33724	1.33215 1.33385 1.33540 1.33693 1.33872	1.33186 1.35352 1.33504 1.33654 1.33830	1.33146 1.33309 1.33459 1.33607 1.33781	1.33098 1.33259 1.33409 1.33554 1.33726	1.33042 1.33201 1.33352 1.33494 1.33666

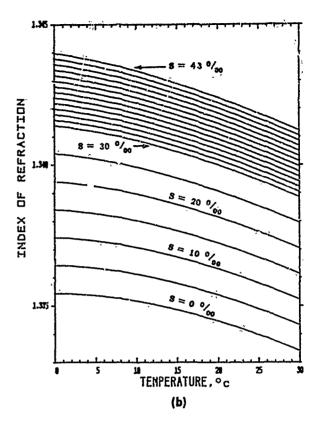
Table 4-2. Selected data of the index of refraction, as a function of wavelength, salinity and temperature at atmospheric pressure, used in constructing the index tables. Additional values at  $\lambda = 700$  nm and S = 34.998% have Keen estimated.

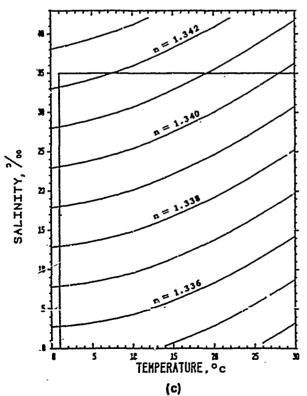
λ —	(e/ <sub>57</sub> )	Chier.	TEMPERATURE OC						
	(0/59)	(v.)	1.0	5.0	10.0	15.0	20.0	25.0	30.0
404.7	0.0	0.0 19.373	1.34375 1.35093	1.34368	1.34348	1.34316. 1.34999	1.34274 1.34950	1.34224 1.34894	1.34166
-435.8	0.0 34.998	0.0 19.373	1.34121	1.34114	1.34094 1.34778	1.34062 1.34736	1.34021 1.34688	1.33971 1.34632	1-33913 1-34569
467.8	0.0 34.998	0.0 19.373	1.33913 1.34615	1.33906 1.34596	1.33886 1.34563	1.33854 1.34520	1.33813 1.34471	1.33764 1.34416	1.33706 1.34355
480.0	0.0 34.998	0.0 19.373	1.33844 :1.34544	1.33837 1.34525	1.33817 1.34492	1.33786 1.34450	1.33745 1.34401	1.33695 1.34345	1.33633
508.5	.0.0 .34.998	0.0 19.373	1.33701	1.33694 1.34378	1.33674	1.33644 1.34302	1.33603 1.34253	1.33554 1.34199	1.33497 1.34138
546.1	0.0 34.998	050 196373	1.33544 1.34235	1.33537	1.33518 1.34183	1.33487 1.34140	1.33447 1.34092	1.33398 1.34037	1.33341 1.33977
577%0	0.0 34.998	0.0 19.373	1.35434	1.33428 1.34104	1.33408 1.34070	1.33378 1.34028	1.33338 1.33979	1.33289 1.33924	1.3323 1.33865
57911	0.0 34.998	0.0 19.373	1.33427 1.34115	1.33421 1.34097	1.33402 1.34084	1:33371 1:34021	1.33331 1.33972	1.33282 1.33917	1.33226 1.33858
589•3·	0.0 34.998	0,0 19.373	1.33395 1.34081	1.33388 1.34063	1.33369 1.34030	1, 33339 1,233987	1.33299- 1.33938	1.33250 1.33883	1.33194 1.33824
643.8	0.0 34.998	0.0 19.373	1.33241 1.33924	1.33234 1.33905	1,33215 1,33872	1.33186 1.33830	1.33146 1.3378).	1.33098 1.33726	1.33042 1.33666
700∍0	0.0 34.998	0.0 19.373	1.33109 1.33788	1.33103 1.33771	1.33084	1.33055 1.33695	1.33016 1.33644	1.32968 1.33591	1.32913

NOTE: For the data at 700 nm see text.

We have plotted in Figure 4-2 an example of the result obtained by using Table 4-2 to construct our greatly expanded tables, included in Appendix A. This figure is for the wavelength 546.1 nm and demonstrates the behavior of index of refraction with salinity (4-2a) and temperature (4-2b). These curves are monotonic and have smooth derivatives. The method used to derive them through interpolation from the data, is included in detail in Appendix B. A particularly interesting situation arises in Figure 4-2b near 0°C; the temperature gradient for pure water (S = 0%0) appears to vanish, while for higher salinities it does not. Since these pure water data were taken from Tilton and Taylor (1936), we have reverted to their work for clarification. Close examination indicated that they found (their p. 463) a maximum of the index of refraction of pure water, located between 0 and 0.5°C depending on wavelength which is reminiscant





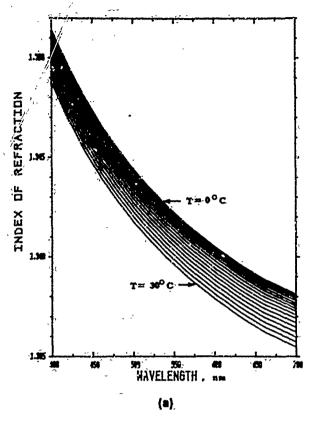


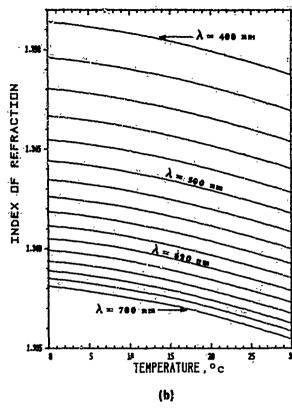
 $\lambda = 546.1 \text{ nm}$  P = 0 (Atmospheric)

Fig. 4-2

The dependence of index of refraction on salinity and temperature.

- (a) The index as a function of salinity, with temperature as the parameter at 2°C intervals.
- (b) The index as a function of temperature, with salinity as the parameter at  $5\%_{00}$  and  $1\%_{00}$  intervals.
- (c) Temperature-salinity diagram with isolines of index of refraction. The region within the inner rectangle is interpolated: values outside are extrapolated.





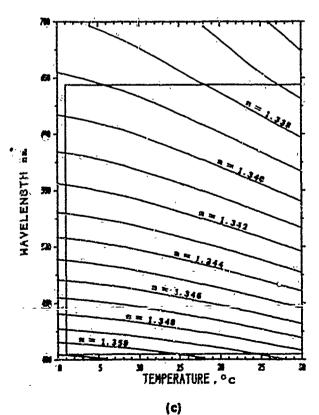


Fig. 4-3

The dependence of index of refraction on wavelength and temperature:

- (a) The index as a function of wavelength, with temperature as the parameter at 2°C intervals.
- (b) The index as a function of temperature, with wavelength as the parameter every 20 nanometers.
- (c) Temperature-wavelength diagram with isolines of index of refraction. The region within the inner rectangle is interpolated; values outside are extrapolated.

of the density maximum of pure water near 4°C. They, however, appear to disagree with some previous workers on whether the index maximum occurs above or below 6°C. In any case, it is too slight to be observed in our tables since it involves a few units in the seventh decimal place in going from 0.5 to 6°C, and the values at 1 and 6°C differ by about one unit in the sixth in index.

In using the data in Table 4-2 to derive our Tables A-1 through A-4 given in Appendix A, we have proceeded in the following manner.

We first proceeded to extend the wavelength coverage out to 700 nm, using the difference in index,  $\Delta \tilde{n}$ , between pure water and 34.926%, salinity seawater in the interval 404.7 to 643.8 nm at seven temperatures as given in Table 4-2. By extrapolating these  $\Delta n$  curves out to 700 nm and knowing the index of pure water at this wavelength, we computed the corresponding values at S = 34.998%, which are shown at the bottom of Table 4-2. The pure water values are directly from Tilton and Taylor, while the others were estimated as indicated above.

Having established the complete data set to be used, we proceeded to interpolate over wavelength, salinity, and temperature, using the computer routine of Appendix B to obtain a much more closely spaced body of data which is presented as Tables A-1 through A-4 in Appendix A. Tables A-1(a) to (p) are for equispaced wavelengths, Tables A-2(a) to (j) are for selected laser wavelengths, Tables A-3(a) to (i) are for the wavelengths used by M-G, while Tables A-4(a) to (t) hold for specified salinities. Note that Tables A-1 and A-4 contain essentially the same data in a different form of presentation. Figure 4-2 is a representative plot of Tables A-1, A-2, and A-3 while Figure 4-3 is representative of Table A-4.

The accuracy of the original values is "within"  $3 \times 10^{-5}$ ; and since our interpolation routine produces values passing through the original data points, we claim our tables to have the same accuracy, except for the extrapolated wavelengths (643.8 to 700 nm) where the accuracy may be stightly reduced.

All of the above are applicable at atmospheric pressure, and the following sections will involve their extension to higher/pressures.

#### 4.3 THE DEPENDENCE OF INDEX ON TEMPERATURE, PRESSURE AND WAVELENGTH

As mentioned at the end of Section 2, the only measurements of the dependence of the index of refraction of seawater on pressure were conducted by Stanley (1971). These measurements are of a lower accuracy (±6x10<sup>-5</sup>) than are the previously described M-G data for atmospheric pressure and hold only for 35%. Copenhagen Standard Seawater. In the interferometric method used, the number of fringes passing a refinence mark were counted as a sample was depressurized to atmospheric pressure. The relationship between the index of refraction n and the number of fringes m is

$$n = \frac{m\lambda}{2t} \tag{4.1}$$

where  $\lambda$  is the wavelength and to the length of the sample traversed by the beam. By differentiating the above:

$$dn = \frac{\lambda}{2t} dm - \frac{n}{t} dt$$
 (4.2)

or in finite difference form

$$\Delta n = n - n_0 = \frac{\lambda}{2\hat{t}_0} \Delta m - \frac{n_0 \Delta t}{\hat{t}_0}$$
 (4.3)

where the subscript zero denotes atmospheric pressure. Here  $\Delta m$  denotes the number of fringes passing a reference mark as the sample was depressurized and  $\Delta t$  denotes the theoretically computed expansion of the vessel due to pressure.

The above equation provides only the change in index  $\Delta n$ , so the index of refraction at atmospheric pressure  $n_0$  must be determined in order to obtain the index at higher pressures. Stanley proceeded to measure  $n_0$  at two travelengths (501.7 and 632.8 nm), using an Abbe refractometer calibrated for the D-lines (589.3 nm) from data for pure water of Tilton and Taylor and for seawater of Utterback, et al. These indices of refraction in air were referred to vacuum (by multiplication with 1.00029) and are shown in Table 4-3 as taken directly from Stanley (1971). They cover the pressure range 0 to 1406 kg/cm² at seven temperatures. The same author, however, also measured the change in index with pressure at three additional wavelengths (457.9, 488.0, and 514.5 nm), but was unable to obtain the corresponding values of  $n_0$  at atmospheric pressure, upon which to base a determination of the absolute indices. These measurements are in the form of fringe counts  $\Delta m$  over the same pressure range but, unfortunately, only at three temperatures (0.03, 15.02, and 29.98°C) and are presented in Table 4-4. The coefficients  $\lambda/2t_0$  and  $\Delta t/t_0$  necessary for applying the above formula for  $\Delta n$  (Eq. 4-3) are also provided, together with Table 4-4, where the multiple entries represent replicate measurements.

Tables 4-3 and 4-4 have been reproduced here in their complete form for comparison with the atmospheric pressure values of the M-G measurements, at the two wavelengths where this is possible. Using the M-G data and our interpolation routine (see Appendix B), we have obtained indox of refraction values at these wavelengths and at the corresponding temperatures, for  $35^{\circ}$  % salinity. A comparison is shown below, where the Stanley data have been divided by 1.00029, to be re-expressed with respect to air.

λ = 501.7 cm

	•	0.03°C	5.03°C	10.03°C	15.02°C	20.00° C	24.99° C	29.98°C
Sta	nley	1.34443	1.34416	1.34373	1.34340	1.34288	1.34233	1.34176
Me	hu et el.	1.34433	1.34411	1.34377	1.34335	1.34286	1.34232	1.34171
Δn	x 10 <sup>5</sup>	10	5	-4	. 5	2	1	5

λ = 632.8 nm

Stanley	1.33976	1.33938	1.33856	1.33850	1.33811	1.33756	1.33698
Mehu et al.	1.33957	1.33934	1.33902	1.33859	1.33810	1.33766	1.33696
Δn x 105	19	4	-6	1	1	0	2

Table 4-3. Absolute index of refraction, with respect to vacuum, taken from the original (Stanley, 1971).
With permission of Pergamon Press.

Pressure			Tempera	ture			
	0-03.C	5-03°C	10 03 °C	15-02°C	20-00°C	24-99°C	29-98°C
			6328 Ån				
Atmospheric	1-34015	1.33977	1.33935	1.33899	1.33850	1-33795	1.33737
352 kg/cm <sup>2</sup>	1.34539	1.34487	1-34431	1-34387	1-34329	1-34270	1.34209
	1-34539	1-34486	1-34431	1-34329	1-34333	1-34271	1·34205 1·34206
703 kg/cm <sup>2</sup>	1-35025	1-34962	1-34896	1-34844	1-34779	1.34713	1-34649
	1-35025	1-34963	1.34897	1-34845	1-34781	1.24713	1.34646
1055 kg/cm <sup>2</sup>	1-35482	1-35403	1-35329	1-35267	1.35200	1.35129	1.35060
	1-35480	1 35404	1-35332	1·35272 1·35267	1-35200	1-35130	1-35057
1406 kg/cm <sup>2</sup>		1.35813	1.35743	1.35666	1-35591	1-35517	1.35446
		1.35815	1.35738	1-35672	1.35593	1.35522	1-35441
	_		1-35733	1.35666			1-35444
				estroms			
Atmospheric	1.34482	1-34455	1-34422	1.34379	1-34327	1.34272	1-34215
352 kg/cm <sup>2</sup>	1.35008	1·349 <del>69</del>	1-34924	1-34873	1-34812	1-34759	1-34694
-	1-37008	1-34969	1.34925	1.34873	1.34814	1-34754	1-34693
						1:34757	1.34695
703 kg/cm²	1-35507	1.35450	1-35394	1-35333	1-352 <del>69</del>	1-35207	1.35136
	1-35507	1-35449	1-35393	1.35332	1.35268	1-35207	1-35138
						1-35211	1.35138
1055 kg/cm <sup>2</sup>	1-35953	1-35891	1-35835	1.35763	1·35 <del>69</del> 5	1-35631	1.35560
	1-35952	1-35892	1.35832	1-35765	1-35696	1-35633	1-35561
	1-35953					1.35632	1-35561
1406 kg/cm <sup>2</sup>	_	1.36315	1-36241	1-36165	1-36094	1-36019	1.35945
	_	1-36312	1-36240	1.36165	1.36096	1-36018	1.35946
				1-36166		1-36021	1.35946

Table 4-4. Interferometer fringe counts, representing the index of refraction, as a function of pressure and temperature, taken from the original (Stanley, 1971). With permission of Pergamon Press.

Number	of fringes count	ed, dm, for 35-00) and war		function of temp	erature, pressure	
Pressure	4579	Wavelength (# 4880	ingstroms) 5017	5145	6328	
		Temperature	0-03°C			
352 kg/cm <sup>2</sup>	67-1	62-4	60-4	58-8	47-7	
202 ng	67-1	62.5	60-4	59-1	47.7	
703 kg/cm <sup>4</sup>	129-3	120-4	117-6	113.6	9í <i>-</i> 7	NOTE: The values of λ/2t
TOO INGO	129-1	120-3	117-5	114.2	91.8	HOIL ING VALUES OF WELL
		.200		114-0	7. 0	and dt/t apply to Equation 4-3
1055 kg/cm <sup>2</sup>	186-2	173-8	168-5	164-4	133-1	
toss velous	1854	173.9	168-4	164.5	132-9	for computing the rise in index
	1007	1737	168-5	104.5	132-7	•
			100.2			of refraction from atmospheric
		Temperature	-15-02°C			
352 kg/cm <sup>2</sup>	62-6	58-1	56-5	54.8	44-3	to some higher pressure.
222 VBI 4111	63-0	58.5	56-5	55-3	44.5	
	•••			55.2	77.2	
703 kg/cm <sup>2</sup>	120-5	113-0	109-2	106-4	85·7	
103 KEIGH	120-9	112%	109.1	106-8	85.8	
	1207	113-0	1071	1000	07.0	
1055 kg/cm <sup>2</sup>	175-0	163-4	158-2	154-2	123·9	$\lambda/2t = 0.0001071$ for 6328 Å
1000 KMCIII-	175·2	163.5	158-4	154-7		=0-0000870 for 5145 A
1405 1-1-1	225-2	211.1			124-4	=0-0000648 for 5017 Å
1406 kg/cm <sup>3</sup>	2232	2111	204-1	199-2	123-8	
	227.0	221.2	2012	100 -	159-8	=0-0000825 for 4880 Å.
	226-0	221-2	204-0	199-3	160-3	≈0-0000774 for 4579 Å
			204-1		159-8	dr/r=0 for atmospheric pressure
		Temperatun	20.0810			
252 belows	59-8	56-1	54.7	62.7	49.6	=-0001012107322 125021
352 kg/cm³	60-2		54.8	53-7	42.0	= -0-0002083 for 703 kg/cm <sup>2</sup>
	60.2	56-2		53-4	42-1	=-0-0003125 for 1055 kg/cm <sup>2</sup>
GA4 1 - 1 4	60-0	100 €	54-9	100 =	42.5	
703 kg/cm <sup>2</sup>	116-3	108-5	106-6	102-7	82.6	0-0004166 for 1406 kg/cm <sup>4</sup>
	116-6	109-0	105-5 105-5	103-2	82-6	
1055 kg/cm <sup>3</sup>	16 <del>9</del> ·7	157-5	153-6	149-4	119-7	•
	169-4	158-0	153-7	149-5	119-4	
1106 1-1	217.6	504.0	153-7	***		
1406 kg/cm <sup>2</sup>	217-6	201-0	197-3	193-0	154-5	
	217-7	204-1	197-5	192-9	153-9	
		204-3	197-5		154-2	

The above comparison indicates that the values agree fairly well at all temperatures, except  $0.03^{\circ}$ C where the difference exceeds the authors' combined specified errors; i.e.,  $3 \times 10^{-5}$  for M-G, and  $\pm 6 \times 10^{-5}$  for Stanley. The negative sign at  $10.03^{\circ}$ C is noteworthy.

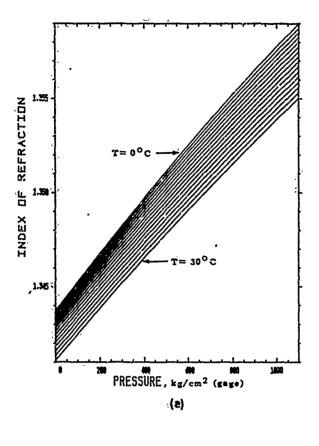
It became necessary, therefore, to take some corrective measures if our complete tables of the index of refraction were to be internally consistent.

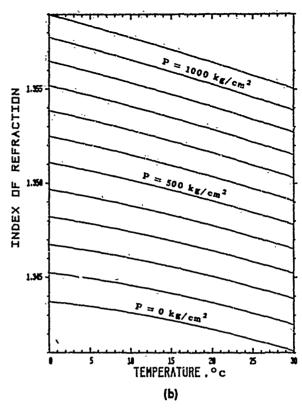
Taking into consideration that the M-G data shown in Figure 4-3 agree well with Utterback, et al., at 35%,  $0^{\circ}$ C and 589.3 nm and are consistent at the other wavelengths as well (the comparison will be presented in Section 5), we have taken exception to Stanley's absolute values of  $n_0$  and place our trust with Mehu and Johannin-Gilles. We thus choose to ignore Stanley's computed absolute indices of refraction shown in Table 4-3 and use instead his original data given in Table 4-4 in combination with the M-G data at atmospheric pressure, which can also be applied to the other three wavelengths. This led to greater consistency in the data.

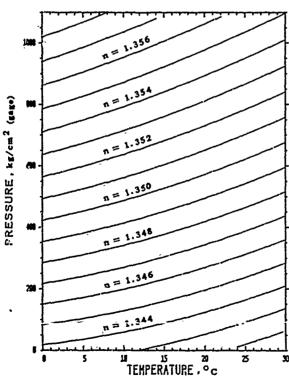
In short, we decided to use, at atmospheric pressure, the index of refraction no derived from the M-G data and to employ Stanley's equation for An (above) and his mean fringe counts from Table 4-4 to derive new values of the index of refraction. Following this we computed the new index of refraction (relative to air) for the five wavelengths, three temperatures and five pressures in the same way, as done by Stanley to construct Table 4-3 with the intention of developing complete tables of the index of refraction of 35% Copenhagen Standard Seawater for a range of temperatures, wavelengths, and pressures. A representative example is shown in Figure 4-4 for one of Stanley's wavelengths, interpolated using our technique. The behavior of the index of refraction curves appears quite smooth as far as can be judged from this plot. Unfortunately, when the same data were subsequently examined against wavelength, it was found that they presented some inconsistencies in their functional behavior which, in our opinion, derive from experimental errors and not from the actual physical behavior of water. They are shown in Figure 4-5 in the form of the difference An of the index at high pressures from that at atmospheric pressure. The latter have been taken from the M-G data, as mentioned above, and can be seen in Figure 4-3a. These inconsistencies of the wavelength dependence led to a reconsideration of Stanley's data and to an attempt to extract from his measurements the most likely physical behavior of the index of refraction of seawater. The following subsection describes in detail the procedure followed to improve on the dependence of the index on wavelength at the same pressures and temperatures as given by Stanley and to obtain a set of smoothly varying index values.

#### SPECIAL CONSIDERATION OF STANLEY'S HIGH-PRESSURE DATA VERSUS WAVELENGTH

The primary use of Straley's fringe-count data was to obtain a "smooth" variation of the index function with the three parameters — wavelength, pressure, and temperature. The condition of "smoothness" was translated mathematically to mean the continuit, and monotonicity of the function and its derivatives. We note in support of our smoothness assumption that Waxler, Weir and Schamp (1964) found this behavior in their study of the index of pure water at high pressures (See Section 4.4 below).







(c)

 $\lambda = E14.5 \text{ nm}$  S = 35 %

Fig. 4-4

The dependence of Index of refraction on pressure and temperature.

- (a) The index as a function of pressure, with temperature as the parameter at 2°C intervals.
- (b) The index as a function of temperature, with pressure as the parameter every  $100 \text{ kg/cm}^2$ .
- (c) Temperature-pressure diagram with isolines of index of refraction.

Initially, mean values for the number of fringes in Table 4-4 were obtained (there are from one to four readings for each deta point) and by using equation (4.3) for  $\Delta n$  (and the  $\lambda/2t_0$  and  $dt/t_0$  values—also in Table 4-4), the change of index of refraction with pressure at each of the three temperatures 0.03, 15.02, 29.96°C was computed, as shown in the first-five columns of Table 4-5 below. We have omitted the pressure 1406 kg/cm² since no values are given at 0.03°C and this pressure is, moreover, beyond the oceanographic range. From preliminary considerations, it was found that the data for 501.7 nm contained much larger random errors than were found at the other wavelengths; thus it was decided to exclude this wavelength from the analysis so as not to weight the final result disproportionately. This wavelength is, however, included in Table 4-5 for comparison. It should be noted that there is a small, but more or less regular, decrease of about  $20 \times 10^{-5}$  in  $\Delta n$  with increasing wavelength which, however, is not quite monotonic (see Figure 4-5). This wavelength dependence is over and above that shown in Figure 4-3a and is a result of the effect of the increase in pressure on the index of refraction.

In order to introduce monotonicity with wavelength, the data were analyzed as described below.

The particular method used to systematize the data was adopted through the gradual development of our procedure. To judge the smoothness of the data, the behavior of the pressure derivative dn/dp was first examined for all wavelengths at each temperature, which necessitated an interpolation to obtain a closer spacing of pressures. These derivatives indicated a general drop with pressure but were somewhat erratic around a linear trend. Noting that there appeared only a small wavelength dependence, we combined all wavelengths to obtain linear least squares fits of  $\Delta n$  versus  $d(\Delta n)/dp$  at each of the three temperatures. By integrating these linear gradients, we recovered the index of refrection dependence on pressure, at each of the three temperatures, as shown in Column 6, Table 4-5. This result was applicable to a "mean" wavelength of about 530 nm (see later) and differs from any one of the first five columns by only 20 x 10<sup>-5</sup> at most. Figure 4-5 shows a plot of these values where the horizontal lines are for the "mean" wavelength 530 nm (Column 6), and the circled points show the index increment computed from the original Stanley fringe counts (Columns 1 through 5). The departures of Column 6 from Columns 1 through 5, therefore, contain the residual wavelength dependence due to the rise in pressure and are numerically given in Columns 1 through 4 of Table 4-6 (excluding 501.7 nm which showed greater discrepancies). The small distance of the points from the lines in Figure 4-5 is exactly this residual wavelength dependence. We have treated this wavelength dependence separately, as described in the following paragraph.

Plotting the values for each temperature and pressure against wavelength (Figure 4-6) it can be seen that they do demonstrate trends that are not, however, monotonic in all cases. Using the method of least squares, straight lines were fitted which exhibited quite satisfactory behavior with wavelength, shown as dashed lines in the figure. The difference exhibited among the linear fits at the three temperatures did not appear to be significant. We therefore, combined the three temperatures to obtain one-single plot of this type, shown as Figure 4-7, with the numerical values shown in Columns 5 through 8 of Table 4-6. In performing the fits, there was a remanent residual error which we have ignored, since it is well within Stanley's  $\pm 6 \times 10^{-6}$  accuracy. However, it is shown in the last four columns of Table 4-7 for reference purposes. Higher-order polynomial fits tried at all steps in this procedure did not appear to provide any decided advantages and have thus been ignored in favor of simplicity.

Table 4-8. The increase in index of refraction (Δn x 10<sup>5</sup>) produced by the rise in pressure. The final column represents an "average-wavelength" behavior obtained using least squares fits.

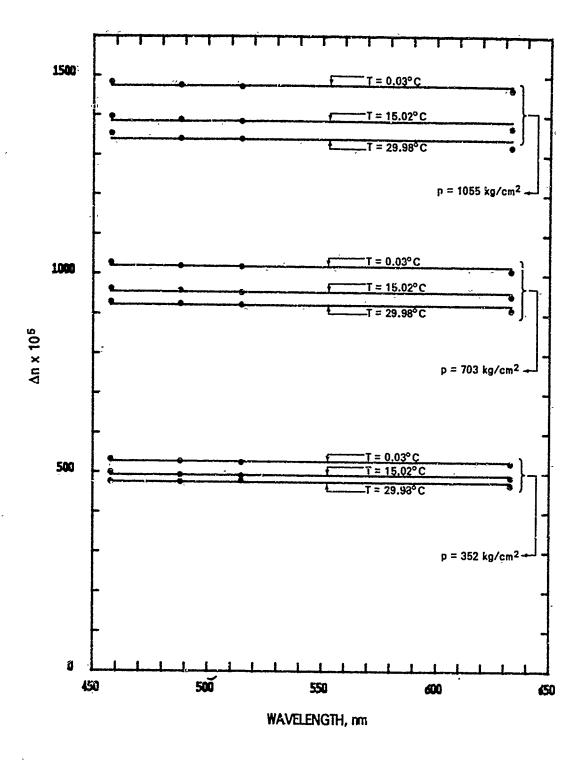
<u> </u>			Computed Stanley Data										
°C	p kg/cm²	457.9 nm	488.0 nm	501.7 nm	514.5 mn	632.8 rsn	530 nm						
0.03	0	0.0	0.0	0.0	0.0	0.0	0.0						
	352	533.2	529.1	526.0	526.7	524.7	528.1						
	703	1027.9	1020.7	1024.7	1019.0	1010.4	1018.7						
	1065	1483.8	1476.1	1470.4	1472.5	1466.1	1474.5						
.15.02	.0	0.0	9.0	0.0	0.0	0.0	0.0						
	352	499.9	494.9	493.0	493.2	489.2	494.0						
	703	962.1	959.6	953.4	955.2	946.0	955-0						
	1055	1397.1	1390.3	1384.2	1385.5	1370.0	1385.6						
29.98	0	0.0	0.0	0.0	0.0	0.0	0.0						
	352	478.3	477.1	478.6	479.7	470.0	476.0						
	703	929.2	925.4	925.4	923.4	912.4	921.9						
	1055	1354.1	1343.2	1344.8	1341.9	1322.0	1340.2						

Table 4-6. The residual wavelength dependence ( $\Delta$  ( $\Delta$ n) x 10°) of the index of refraction due to rise in pressure, and the same systematized to apply at all temperatures.

Т		Diffe	computed S	at 530 nm fr tanley data x 10 <sup>5</sup>	om	Fit		all temperatures ) x 10 <sup>5</sup>		
•c	p kg/cm²	457.9 nm	488.0 nm	514.5 nm	632.8 nm	457.9 nm	488.0 nm	514.5 nm	632.8 nm	
v.03	0 362 703 1065	0.0 5.1 9.2 9.3	0.0 1.0 2.0 1.6	0.0 -1.4 0.3 -2.0	0.0 -3.4 -8.3 -8.4	0.0 3.4 6.8 9.1	0.0 2.0 4.0 5.0	0.0 0.7 1.6 1.3	0.0 -5.0 -9.3 -14.8	
15.02	0 362 703 1065	0.0 5.9 7.1 11.5	0.0 0.9 4.6 4.7	0.0 -0.8 0.2 -0.1	0.0 -4.8 -9.0 -15.6		SA	ME		
29.98	0 362 703 1055	0.0 2.3 7.3 13.9	0.0 1.1 3.5 3.0	0.0 3.7 1.5 1.7	0.0 -6.0 -9.5 -18.2		SA	ME		

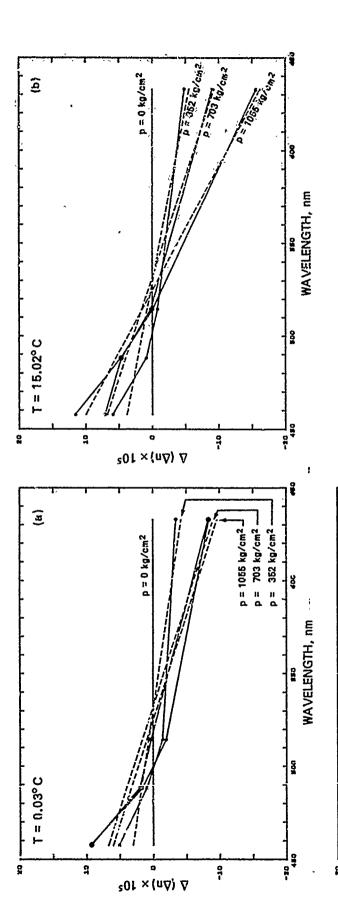
Table 4-7. Comparison of index data ( $\Delta n \times 10^5$ ) computed from Stanley's fringe counts with the systematized values adopted to construct the index of refraction tables. Also shown are the residual differences that remain unaccounted.

7	В	Com	puted Stanle	y deta, An x	105		Present stu	dy An x 105		Residue1 differences of Δn x รป <sup>6</sup>			
*C	kg/cm <sup>3</sup>	457.9 nm	468.0 nm	514.5 nm	632.8 nm	457.9 nm	488.C nm	514.5 mn	632.8 nm	467.9 nm	488.0 nm	514.5 mn	632.8 nm
0.03	0 362 703 1066	0.6 533.2 1027.9 1483.8	0.0 529.1 1020.7 1476.1	0.0 526.7 1019.0 1472.5	0.0 524.7 1010.4 1466.1	0.0 531.6 1025.5 1483.6	0.0 530.1 1022.7 1479.4	0.0 528.8 1020.3 1475.8	0.0 523.1 1009.4 1459.6	0.0 1.6 2.4 0.2	0.0 -1.0 -2.0 -3.3	0.0 -2.1 -1.3 -3.3	0.0 1.6 1.0 6.5
15.02	g. 352 703 1065	0:0- 499.9 962.1 1397.1	040 494.9 959.6 1330.3	0.0° 493.2 955.2 1385.5	0.0 489.2 946.0 1370.0	0.0 497.4 961.7 1394.6	496.0 959.0 1390.5	0.0 494.7 956.5 1736.9	0.0 489.0 945.7 1370.7	0.0 2.5 0.4 2.5	0.0 -1.1 0.6 -0.2	0.0 -1.5 -1.3 -1.4	0.0 0.2 0.3 -0.7
29.98	0 362 703 1065	0.0 478.3 929.2 1354.1	0.0- 477.1 925.4 1343.2	0.0 479.7 923.4 1341.9	0.0 470.0 912.4 1322.0	0.0 479.4 928.7 1349.3	0.0 478.0 925.9 1345.2	0.0 476.7 923.5 1341.5	0.0 471.0 912.6 1325.4	0.0 -1.1 0.5 4.8	0.0 -0.9 -0.5 -2.0	0.0 3.0 -0.1 0.4	0.0 -1.0 -0.2 -3.4



NOTE: The data are taken from Table 4-5. The circled points are for the five wavelengths, while the host-zontal lines represent the values in Column 6.

Fig. 4-5. The increase in index of refraction, due to elevated pressure, over the corresponding values at atmospheric pressure. The slight non-monotonicity of Stanley's data is evident.



NOTE: This is a plot of the departure of the circled points from their respective horizontal lines in Figure 4-5. Numerical values are given in Table 4-6, columns 1 through 4. The dashed lines represent linear least squares fits, utilized to systematize the deca.

(၁

= 29.98°C

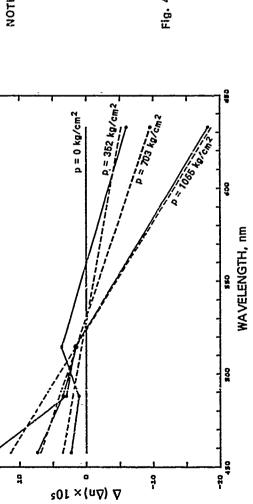
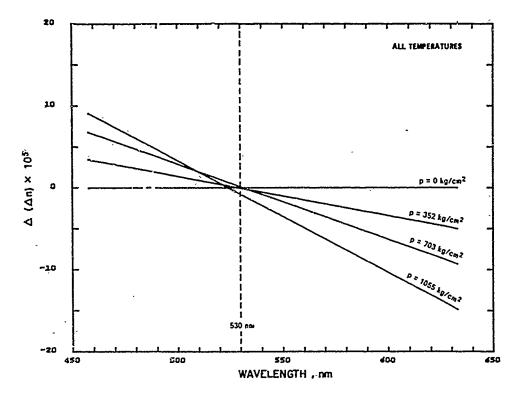


Fig. 4-6. The residual wavelength dependence of the index of refraction, produced by the rise in pressure.



NCTE: This figure combines the three cases in Figure 4-6. Numerical values are given in the last 4 columns of Table 4-6. The plot demonstrates that no wavelength correction is necessary at 530 nm.

Fig. 4-7. Systematized behavior of the residual wavelength dependence of the index of refraction, produced by the rise in pressure, applicable at all temperatures.

As a result of the above work, we have constructed a new set of data to replace Stanley's, with the advantage of "smooth" functional behavior and with residual errors that are within his  $\pm 6 \times 10^{-5}$  accuracy. This new data set is presented, adjacent to the corresponding Stanley data, as the center panel of Table 4-7. It contains the maximum information yielded by Stanley's original data and forms the basis of our smoothly-behaved interpolated and extrapolated index values at high pressures which are presented in Tables A-5(a) and A-5(b) of Appendix A. The linear least squares fit technique used in generating the new data set has the additional advantage of permitting linear extrapolation beyond the range of 457 to 632 nm to obtain the index of refraction values at other wavelengths with the same accuracy as that of the interpolated data.

Tables A-5(a), (b) in Appendix A were obtained using the same interpolation routine (described in Appendix B). Table A-5(a) is exact for the wavelength of 530 nm (see Figure 4-7), and only approximate for the other wavelengths, while Table A-5(b) provides corrections for the other wavelengths. Both are sequentially additive to Tables A-1 through A-4 of Appendix A to provide the temperature and wavelength dependence of the index of refraction, with respect to air, of 35% Copenhagen Standard Seawater at

higher-than-atmospheric pressures. In order to provide the reader with a feeling of the actual values of the index of refraction of seawater at higher-than-atmospheric pressure, we have compiled Table 4-8 in which the value at atmospheric pressure has been taken from our tables, and the values at higher pressures are obtained by adding the central panel of Table 4-7.

Unfortunately no comparison with other results can be made since no other measurements for high pressures exist. Because our residual errors (Table 4-7) are below Stanley's stated accuracy, we feel confident that our Table A-5(a) and A-5(b) are at least as accurate as his  $\pm 6 \times 10^{-5}$  uncertainty.

In order to extend these high-pressure data to other salinities, and permit the computation of the index of refraction of any seawater sample, we have considered some additional data as described in the following subsection.

Table 4-8. The index of refraction, as a function of wavelength, pressure, and temperature, obtained by combining data at atmospheric pressure with data representing index increments due to pressure. Salinity is 35%.

°C	p kg/cm²	457.9 nm	488.0 nm	514.5 nm	632,8 nm
	0	1.34681	1.34504	1.34372	1.33957
0.00	352	1.35214	1.35034	1.34901	1.34480
0.03	703	1.35708	1.35527	1.35392	1.34966
	1655	1.36164	1.35984	1.35848	1.35416
	0	1.34582	1.34407	1.34273	1.33859
45.00	352	1.35082	1.34903	1.34768	1.34348
15.02	703	1.35544	1.35366	1.35230	1.34805
	1055	1.35979	1.35797	1.35660	1.35230
	0	1.34417	1.34240	1.34110	1.33695
00.00	352	1.34896	1.34719	1,34587	1.34167
29.98	703	1.35346	1.35167	1,35034	1.34608
	1055	1.35771	1.35586	1.35452	1.35021

#### 4.4 EXTENSION OF THE HIGH PRESSURE INDEX TO OTHER SALINITIES

The preceding analysis has provided a measure of the index of refraction dependence on temperature, salinity and wavelength at atmospheric pressure only (Subsection 4.2) and of its dependence on temperature and wavelength at higher pressures, but only at 35% salinity (Subsection 4.3).

In order to extend this latter dependence to other salinities, we have had to assume that the dependence on salinity at high prossures is linear, a hypothesis which we already employed for the atmospheric pressure data. By linear interpolation, we may take pure water data at higher pressures along with the 35%, high pressure data of Subsection 4.3 and obtain the index at any desired salinity under pressure.

We are aware of only three studies in which measurements of the index of refraction of pure water have been made at high pressures. Two of these studies, Rosen (1947) and Stanley (1970), have presented only limited coverage of temperature and wavelength, respectively, and cannot serve as a basis for extended tables. The third study, Waxler, Weir and Schamp (1964), has by far the best coverage of temperature, wavelength and pressure, and is the only one that will concern us here.

The ranges of the parameters are quite adequate for our purpose; namely, 8 wavelengths, 5 temperatures and 5 pressures covering 467.8 to 667.8 nm, 1.56 to 54.34°C, and 1 to 1127 bars (absolute), respectively. The two difficulties that appeared were that the pressures at which measurements were made are different for the different temperatures and that the values of the index of refraction are absolute. A reproduction of the original data is shown as Table 4-9. insorder to use the data, it became necessary to preprocess them as follows. First the pressure in bars (absolute) was converted to kg/cm² (gage) using the relationship

$$p(kg/cm^2, gage) = [p(bars abs.) - 1] \times 1.019716$$
.

Table 4-9. Original data of the index of refraction of pure water as a function of pressure, temperature, and wavelength; from Waxler, Weir and Schamp (1964). Pressure in bars (absolute) and wavelength in Angstroms.

Temperature °C	Wavelength Pressure A bars	6678.149	6438.4696	5875.618	5085.82	5015.675	4921.929	4799.92	4678.16
						,			
	1	1.33220	1.33279	1.33438	1.33739	1.33772	1.33832	1.33882	1.33951
	269.5	1.33635	1.33697	1.33857	1.34161	1.34197	1.34254	1.34305	1.34374
1.56	507.4	1.33989	1.34047	1.34212	1.34517	1.34552	1.34615	1.34663	1.34734
	768.5	1.34350	1.34415	1.34579	1.34887	1.34923	1.34985	1.35034	1.35106
	1049.7	1.34721	1.34785	1.34947	1.35255	1.35296	1.35359	1.35408	1.35479
	1	1.33204	1.33263	1.33422	1.33724	1.33757	1.33803	1.33867	1.33935
	256.1	1.33586	1.33645	1.33804	1.34108	1.34139	1.34186	1.34252	1.34325
7.64	497.8	1.33940	1.34002	1.34160	1.34466	1.34502	1.34544	1.34614	1.34688
	730.7	1.34267	1.34324	1.34494	1.34801	1.34828	1.34877	1.34944	1.35073
	1088.9	1.34698	1.34764	1.34928	1.35243	1.35273	1.35318	1.35391	1.35462
	1	1.33077	1.33138	1.33293	1.33591	1.33624	1.33670	1.33734	1.33802
	259,6	1.33438	1,33490	1.33653	1.33953	1.33987	1.34030	1.34096	1,3416
24.80	463.6	1.33714	1.33780	1.33943	1.34240	1.34278	1.34324	1.34389	1.3445
	762.8	1.34106	1.34163	1.34322	1.34630	1,34660	1.34710	1.34778	1.3484
	1108.6	1.34521	1.34581	1.34748	1.35053	1.35085	1.35133	1.35201	1.3527
	1	1.32963	1.33020	1.33177	1.33474	1.3350€	1.33552	1.33615	1.3368
	259.3	1.33319	1.33375	1.33531	1.33830	1.33865	1.33908	1.33974	1.3404
34.50	480.9	1.33614	1.33679	1.33832	1.34132	1.34163	1.34213	1.34274	1.3434
	799.2	1 34007	1.34060	1.34228	1.34537	1.34567	1.34613	1.34676	1.3474
	1110.0	1.34367	1.34429	1.34589	1.34897	1,34928	1.34974	1.35042	1.3511
	1	1.32655	1.32712	1.32866	1.33159	1.33191	1.33236	1.33299	1.3336
	241.6	1.32985	1.33043	1.33192	1.33490	1.33523	1.33567	1.33633	1.3369
54.34	489.7	1.33307	1.33361	1.33518	1.33813	1.33849	1.33893	1.33960	1.3402
	785,1	1.33667	1.33725	1.33883	1.34184	1.34216	1.34258	1.34327	1.3439
	1127.7	1.34053	1.34116	1.34274	1.34577	1.34608	1.34656	1.34718	1.3479

It then became necessary to express all the data at the same values of pressure for all temperatures. This was accomplished using the interpolation technique of Appendix B, and the pressures were chosen to be close to the original, namely, 0, 250, 500, 750, 1100 kg/cm². Having expressed all the data on the same basis, we next converted the index data from absolute to relative-to-air by dividing with 1.000282. This factor was obtained by dividing the atmospheric pressure data with those of Tilton and Taylor (1938), since the authors did not explicitly state how they arrived at the absolute index. It may be recalled that Stanley (1971) used the factor 1.00029 for this purpose.

Since the final presentation was decided to be in the form of tables of index increments at higher pressures over the atmospheric pressure values (as also done in Subsection 4.3), we subtracted the atmospheric pressure values to obtain only increments,  $\Delta n$ , with pressure, temperature and wavelength, as shown in Table 4-10 where the upper panel for P=0 represents the actual index of refraction values (with respect to air), and the lower panel provides the increments of index.  $\Delta n$ , with increasing pressure for P=250, 500, 750, 1100 kg/cm<sup>2</sup>. We subsequently proceeded to separate the effects of wavelength and temperature in order to permit a more concise final presentation.

The first step in-this latter procedure was to average the  $\Delta n$  increments over all 8 wavelengths, as shown in the right hand column of Table 4-10, then subtract these averages from the table itself to obtain a table of "first order" residuals. These residuals were subsequently averaged over temperature, Table 4-11a, and these averages were fitted versus wavelength using linear least squares, Table 4-11b. Thus we managed to separate the data into a pressure-temperature component (last column, Table 4-10) and into a pressure-wavelength component (Table 4-11b), in exactly the same way that the Stanley data were presented in Subsection 4.3. In order to check this relatively simple procedure, which was dictated by our previous experience with the Stanley data, we used these results to reconstruct the index increments, as given in Table 4-12 and compare with Table 4-10. The difference of the two, presented in Table 4-13, obviously shows that the unaccounted-for residuals are quite small and in almost all cases are smaller than 5 units in the fifth decimal place. This compares very favorably with the authors' statement that "the standard deviation of the index values is 0.00005 which corresponds to a limit of reproducibility of  $\pm 0.0001$ ," and also has the advantage of smooth and monotonic behavior of the function and its first derivative, i.e., it is quite free of the random fluctuations in the fifth decimal place due to observational errors.

During the above procedure it was found necessary to modify two data values of the index of refraction, the first of which was in disagreement with Tilton and Taylor (1938) and the second modification was indicated by the general trend of the rest of the data. These values are: at  $P \approx 0$ ,  $\lambda = 492.2$  nm, T = 1.56°C changed from 1.33832 to 1.33818 and the second at P = 750 kg/cm²,  $\lambda \approx 467.8$  nm, T = 7.64°C changed from 1.35082 to 1.35002.

The results of the high pressure behavior of the index of refraction of pure water, shown as a function of temperature in the last column of Table 4-10 and as a function of wavelength in Table 4-11(b) were interpolated (and extrapolated over wavelength) using the technique in Appendix B, to generate the extended Tables A-6(a),(b) given in Appendix A. The form of these-tables is similar to that of Tables A-5(a), (b), i.e., they are incremental to the atmospheric pressure values given in Tables A-1 through A-4.

Table 4-30. The pure-water index of refraction at atmospheric pressure, together with the index increments produced by rising pressure.

p lg/m²	ī,	447.0	480.0	492.2 na	501.4 nm	508.6 900	537.6 cm	643.8 MA	667.5 ma	
P.= 0.0	1.56 .7.64 24.89 34.39 54.34	1.31713 1.33477 1.33764 1.33445 1.33328	1.33844 1.33829 1.33696 1.33577 1.33261	1-33780 1-33705 1-33632 1-33510 1-33198	3.33734 1.33729 1.33594 1.33468 3.33153	1.33701 1.33686 1.33553 1.33436 1.33121	1.33400 1.33284 1.33255 1.33140 1.32828	1.33241 1.33225 1.33099 1.32982 1.32675	1.33182 1.33167 1.33039 1.32926 1.32618	
P= 250.0	1.56	386.5	386-7	387.9	388.9	325.9	363.1	382.7	379.3	385.1
	7.64	374.6	360-8	367.9	367.2	369.2	367.1	367.2	367.0	369.7
	24.80	345.8	343-0	341.1	343.9	342.9	347.1	344.1	347.3	343.0
	54.50	341.7	340-8	337.6	340.9	337.8	335.9	336.9	338.0	339.7
	54.34	338.3	340-0	337.2	338.3	337.0	332.2	336.7	355.9	336.9
P= 50G.0	1:56	758.8	754.9	755.4	756.2	754.1	759.4	744.6	745.6	752.8
	7.64	743.2	737.1	731.2	735.1	732.2	728.1	729.4	726.3	732.9
	24.60	694.3	693.1	641.7	691.5	487.1	636.9	680.6	673.8	687.4
	34.50	674.5	672.5	675.0	670.5	671.6	669.5	672.8	644.0	671.7
	54.34	664.0	662.9	658.9	660.0	655.9	653.9	650.8	653.9	657.4
P= 750.0	1.56	1110.4	1107.3	1104.7	1104.3	1103.6	1097.1	1091.8	1086.5	1101.;
	7.64	1075.1	1084.5	1081.6	1078.5	1084.7	1079.6	1068.4	1070.5	1077.;
	24.8C	1010.8	1010.7	1007.0	1003.0	1005.5	996.2	994.1	994.9	1002.;
	34.50	986.8	984.0	985.1	983.5	985.7	975.6	975.1	969.5	980.;
	54.34	971.0	969.1	963.2	966.1	964.9	958.4	953.9	954.2	962.;
P=1100.0	1236	1565.6	1543.8	1562.5	1561-5	1552.9	1546.2	1543.5	1539.i	1554,4
	7.64	1515.0	1512.7	1503.9	1504-9	1508.1	1495.3	1489.9	1483.2	1501.6
	74.60	1434.1	1432.3	1428.3	1425-6	1427.2	1419.5	1410.6	1410.4	1423.5
	34.50	1397.7	1392.3	1387.6	1388-0	1369.0	1377.4	1374.4	1349.4	1384.5
	54.34	1371.4	1345.9	1365.5	1364-5	1364.9	1354.9	1350.7	1345.4	1360,4

NOTE: At p = 0 the index of refraction per se is shown. At higher pressures, only the increase in index over thit of atmospheric pressure is given. (Compare with Table 4-5.) The column on the right repretents the "evertipe" dependence of the index on temperature and pressure, i.e., for an "everage wavelength" which turned out to be 540 nm. Values in body of table for pressures 250 kg/cm² and above are Δn x 103.

Table 4-11. The residual wavelength dependence of the pure water index of refraction due to rise in pressure alone. The temperature effect has been removed. (a) Shows the values of the means of the residuals obtained from Table 4-10. (b) Shows the linear least squares fit on the values of (a) at left. Compare to Table 4-6.

	Pressure lig/cm <sup>2</sup>										
A pm	0.0	250.0	500.0	750.0	1100.0						
467.8 480.0 492.2 501.6 506.6 587.6 643.8 667.8	0.0	2.9 1.6 -0.1 1.3 0.0 -2.6 -1.0	6.6 4.2 2.2 2.3 -0.2 -2.3 -4.7 -7.6	5.8 6.1 3.7 2.5 3.9 -3.6 -8.3	11.9 8.5 4.7 4.0 3.5 -6.2 -11.0	(a					

	1		Pres	ssure kg/o	773 Z	
1	λ nm	0.0	250.0	500.0	750.0	1100.0
	467.8	0.0	1.5	4.4	6.2	
(b)	480.0	0.0	1.2	3.7	5.2	
10,	492.2 501.6	0.0	1.0	3.0	3.4	5.2
	508.6	0.0	0.7	2.1	2.9	4.3
	587.6	0.0	-0.9	-2.6	-3.6	-5.4
	543.8	0.0	-2.C	-5.9	-8.2	-12.3
	667.8	0.0	-2.4	-7.3	-10-Z	-15.3

Table 4-12. The computed smoothly varying increments of index over the corresponding values at atmospheric pressure, as a function of pressure, temperature, and wavelength.

p kg/cm²	•C	467.8 LA	480.0 HTR	492.2 nm	501.6 nm	508.6 nm	587.6 Mi	43.8 m	667.8 m
	1.56	386.6	386.4	356.1	385.9	385.8	384.3	383.2	382.7
	7.44	370.2	370.0	369.7 344.0	369.6 343.9	369.4	367.9	366.8	366.3
P= 250.0	34.50	344.5	340.0	339.7	339.6	339.4	337.9	336.6	336.3
	54.34	338.4	338.2	337.9	337.8	337.6	336-1	335.0	334.5
	2.56	757.2	756.5	755.8	755.3	754.8	750.2	746.9	745.5
	7.64	737.3	736.6	735.8	735.3	734.9	730.3	727.0	725.6
P= 500.0	24.80	671.5	691.1	690.4	689.9	689.5	684.8	681.5	680-1
	34.50	642.0	661.3	660.6	673.7	673.2	655.0	651.7	650.3
	1.56	1107.4	1106.4	1165.4	1164.7	1104-1	1097.6	1093.0	1091.0
	7.64	1084-1	1083.1	1082.1	1081.3	1010.7	1074.3	1049.7	1067.7
P- 750.0	24.80	1009.0	1008.0	1007.0	1005.2	1005.4	999.2		992.6
	34.50	936.3	985.8	784.8	984.0	983.4	976.9	972.3	970.4
	54.34	768.8	967.8	966.8	966.0	965.5	959.0	954.4	952.4
	1.56	1563.7	1562.2	1560.7	1559.6	1558.7	1549.0	1542-1	1539.1
	7.64	1511.0	1507.5	1508.0	1504.8	1505.9	1496.2	1489.3	1436.4
P=1100.0	24.80	1432.8	1431.3	1429.8	1430.7	1427.4	1418.1	1411.2	1408.2
	34.50 54.34	1393.2	1392.3	1346.7	1365.6	1364.7	1355.0	1348.1	1345.1

NOTE: This is the end result, in the analysis of the Waxler, et al. data. The values are directly comparable to Table 4-10. See also Table 4-7. Values in body of table are  $\Delta n \times 10^5$ .

Table 4-13. The final unaccounted for residuals of the index of refraction of pure water. The distribution of the numerical values essentially demonstrates the scatter of errors in the dota. See also Table 4-7:

p kx/cm²	°C	467.8	480.0	492.2	501.6	508.6	587.6	643.8	667.8
P= 250+0	1.56 7.64 24.80 34.50 54.34	0.1 -4.4 -1.3 -1.5 0.2	-0.4 0.1 1.2 -0.9 -1.8	-1.7 8 2.9 1.9 0.7	-3.0 2.4 -0.0 -1.4 -0.5	-0.1 0.3 0.8 1.6	1.2 0.8 1.1 2.0 3.9	0.5 -0.4 -3.0 -0.2 -1.8	3.4 -0.7 -1.7 -1.7
P= 500.0	1.56	-1.6	-0.4	0.0	-0.9	0.8	-0.1	2.3	-0.1
	7.64	-5.9	-0.5	4.7	0.2	2.6	2.1	-2.4	-0.8
	24.80	-2.4	-2.0	-1.3	-1.6	2.3	-7.1	0.7	6.4
	34.50	1.1	2.4	-0.8	3.1	1.7	0.1	-7.5	-0.1
	54.34	-2.0	-1.6	1.7	-0.0	3.7	1.1	0.9	-3.6
P= 750.0	1.56	-2.9	-0.9	-1.3	-1.6	0.5	0.5	1.2	4.5
	7.64	9.0	-1.4	0.5	2.8	-4.0	-5.3	1.3	-2.8
	24.80	-1.8	-2.7	-0.0	3.2	0.2	3.0	0.5	-2.3
	34.50	-0.0	1.8	-0.3	0.5	-2.3	1.3	-2.8	1.8
	54.34	-2.2	-1.3	3.6	-0.0	0.5	0.6	0.5	-1.7
P=1100.0	1.56	-1.8	-1.6	-1.8	-2.0	5.8	2.8	-1.4	-0.0
	7.64	-4.0	-3.3	4.0	1.9	-2.2	1.0	-0.6	3.2
	24.80	-1.3	-1.0	1.5	3.1	0.6	-1.4	0.6	-2.2
	34.50	-3.9	0.0	3.2	1.7	-0.2	1.7	-2.3	-0.2
	54.34	-1.6	2.3	1.3	1.1	-0.2	0.1	-2.6	-0.3

The manner that Tables A-6(a),(b) are to be used, is to first find the index of pure water at atmospheric pressure from Tables A-1 through A-4, then add the appropriate value given in A-6(a) and then add algebraically the one in Table A-6(b).

Their use, in conjunction with Table A-5(a),(b), is to provide, by linear interpolation, the index of refraction at any desired salinity, any high pressure, and for any given temperature and  $\frac{1}{2}$  length, since the appropriate information exists for S = 35% and S = 0%.

As a check on the accuracy of our pure water high-pressure data we may also by any tree with Rosen (1947) and Stanley (1970). We have computed from our tables the index appropriate to the parameters that these authors employed and the comparisons are shown in Table 4-14. It was necessary to convert the pressures of Rosen from absolute atmospheres to  $kg/cm^2$  gage using  $p(kg/cm^2, gage) = p(atm., abs) - 1)/0.967842$  and also to convert the Stanley data to index referred to air rather than vacuum vacuum by dividing by 1.000292, before performing the comparisons.

Due to the generally lower accuracies of the higher-pressure data the comparison is only valid to one or two units in the fourth decimal place. More specifically Waxler et al. whose data we used to construct our tables, state an uncertainty of  $\pm 0.0001$ , while Stanley states a total experimental error of  $\pm 0.00006$ . In the case of Rosen no specific mention of error was made but there is a statement implying

Table: 4-14. Comparison of Rosen (1947) and Stanley (1970) data, for pure water, with interpolated values of present-study.

(a) Comparison with Rosen (1947). Pure water at  $T \approx 25^{\circ} \text{C}$ . Discrepancies  $\Delta n \times 10^{4}$  show no trend.

,	λ = 406 nm			λ	= 436 nm		λ-	= 546 nm		λ = 579 nm		
p kg/cm²	Rosen	Present Study	Δn	Rosen	Present Study	Δ'n	Rosen	Present Study	Δn	Rosen	Present Study	Δn
:0.0	1.3422	1.34212	0.8	1.3398	1.33969	1:1	1.3340	1.33398	0.2	1.3330	1.33282	1.8
515.6	1.3496	1.34928	3.2	1.3472	1.34683	3.7	1.3413	1.34106	2.4	1:3401	1.33968	1.3
1032.2	1.3558	1.35571	0.9	1.3531	1,35324	-1.4	1.3474	1.34741	-0.1	1.3462	1.34621	-0.1

(b) Comparison with Stanley (1970). Pure water for  $\lambda=632.8$  nm. Discrepancies  $\Delta n \times 10^4$  increase with increasing pressure.

	T = 1.03°C			Т=	= 5.03°C		T =	10.02°C		T = 15.01°C		
`p kg/cm²	Stanley	Present Study	Δn	Stanley	Present Study	Δn	Stanley	Present Study	Δn	Staniey	Present Study	Δn
0	1.33270	1.33270	0.0	1.33263	1.33263	0.0	1.33244	1.33244	0.0	1.33213	1.33215	-0.2
352	1,33829.	1.33806	1.3	1.33805	1.33785	2.0	1.33772	1.33753	1.9	1.33723	1.33712	1.1
703	1.34341	1.34302	3.9	1.34294	1.34281	1.3	1.34260	1.34243	1.7	1.34201	1.34193	0.8
1055	1.34811	1.34763	4.8	1.34772	1.34721	5.1	1.34716	1.34672	4.4	1.34655	1.34619	3.6

	Τ=	20.01°C		Т=	24.98°C		T = 29.98°C				
p kg/cm²	Stanley	Present Study	Δn	Stanley	Present Study	Δn	Stanley	Present Study	Δп		
0	1.33173	1.33175	-0.2	1.33126	1.33127	-0.1	1.33070	1.33071	-0.1		
352	1.33680	1.33663	1.7	1.33625	1.33607	1.8	1.33564	1.33546	1.8		
703	1.34151	1.34132	1.9	1.34085	1:34065	2.0	1.34021	1,33996	2.5		
1055	1.34590	1.34619	3.4	1.34516	1.34437	2.9	1.34447	1.34411	3.6		

that the errors are approximately 0.0001. Thus agreement within two units in the fourth place, i.e., the combined error ranges, may be considered good. in Table 4-14 the comparisons of our tables with Stanley and Rosen are shown, to the fourth decimal place, following the authors' level of accuracy. From Table 4-14(b) it is evident that the discrepancies with Stanley's data grow with increasing pressure, whereas they essentially vanish at atmospheric pressure since in both studies the Tilton and Taylor data were used. Thus Stanley's data suggest that the index of refraction may be greater than we have taken it to be. In Table 4-14(a) a comparison with Rosen's data is presented. Here again there is disagreement, but no trend in the discrepancies is evident.

Whatever the case may be, the above comparisons only serve to illustrate what was stated previously, namely, that the pure water high-pressure index data are of a lesser quality than the data examined in Subsections 4.2 and 4.3. For the sake of offering a numerical error estimate, we suggest that the Tables A-6(a),(b) we have constructed in Appendix A have errors of  $\pm 0.0001$  up to mid-pressures and perhaps  $\pm 0.0002$  at the highest pressures.

Of course the purpose of this subsection was not so much to offer accurate values of the pure water index of refraction per se, as to make possible the computation at various salinities through linear interpolation, in conjunction with Stanley's data for S = 35% presented in Subsection 4.3. For this purpose, it is felt that the data presented here should be satisfactory to the engineering user. The main advantage of our numerical values lies in the smooth functional behavior, which we have secured through our method of analysis.

#### 4.5 COMMENTS

As a summary to our work, it is now possible, using the material presented in Subsections 4.2, 4.3, and 4.4, to completely traverse the index of refraction of seawater surface, even at high pressures. The accuracy with which this can be done is at the mercy of the assumption of linear dependence on salinity at all pressures. This linearity is quite well supported at atmospheric pressure by several authors although some questions still remain as will be mentioned in Section 5 when the data of Rusby and of Mehu and Johannin-Gilles are discussed. We have chosen to carry this linearity further and apply it to higher pressures although we cannot support this with any experimental evidence; this portion of our work therefore must be viewed as an approximation awaiting confirmation, it was only undertaken to provide the final link in completely covering the index of refraction dependence on its four parameters and we feel that this is preferable to not presenting it at all.

The general method that is to be employed in finding the index of refraction at any given wavelength, temperature, pressure, and salinity is to first use Tables A-1 through A-4 in Appendix A to determine the index at atmospheric pressure for salinities  $S=0\%_0$  and  $S=35\%_0$ . Then proceed to Tables A-5(a),(b), and A-6(a),(b) to include the pressure effect at these two salinities and finally interpolate linearly between the values at the two salinities to arrive at the desired index of refraction.

## 5. COMPARISONS WITH PREVIOUSLY PUBLISHED DATA

In this section we will use our interpolation procedure to produce values of the index of refraction of seawater for the particular values of the independent variables — salinity, temperature, and wavelength — at which other investigators have made their measurements. This affords the possibility of comparison with their results and an additional indication of the accuracy of the index values we are presenting. It is also an opportunity to compile the results of these investigators work within a single publication.

At the outset, it may be recalled that very little work has been done on the dependence of the index of refraction on pressure. The works of Stanley (1971) and Waxler, Weir and Schamp (1964) have adequately fulfilled this need and have been exhaustively dealt with in Subsections 4.3 and 4.4. All the comparisons that will be presented here, will therefore be restricted to measurements at atmospheric pressure only, but for the various values of temperature, satinity and wavelength as indicated in each case.

Most investigators have made measurements only over restricted ranges of the variables, thus each comparison will be valid only for those ranges. We hope to show, however, that our results as presented in Appendix A appear to be accurate to a few units in the fifth decimal place and have the advantage of providing complete coverage of the ranges of the variables, as opposed to what may be obtained from the results of any single investigator.

It is quite difficult, if not impossible, to compare our results with the old studies conducted before about 1930, because the seawater samples that were measured were often characterized by their specific gravity and temperature, rather than salinity and temperature. In principle, it is possible to derive the

salinity from the specific gravity and then compare with our results; but due to the problems of charges in the definition of salinity and of its relationship to specific gravity, as mentioned in Section 3, it is not obvious that such comparisons are actually valid. Among the older investigators, only Tornoe (1900) and Krummel (1907) gave values of the salinity of their samples, but it is believed that their "salinity," measured gravimetrically, differs somewhat (see Section 3) from the salinity as now used. Thus, comparisons with the older measurements must be viewed with caution.

We will first present comparisons with those index measurements which are specified by the actual salinity (or chlorinity) and temperature of the samples. Following this, we will provide comparisons with data from those studies that provide the specific gravity and temperature of the seawater samples from which we will derive the salinity at which the measurements were made.

To facilitate comparison of data, we have presented the index values of each investigator,/then our own values, and next to these the difference between the two, in the fifth decimal place. Positive differences indicate that the particular investigator's values are high, and negative differences indicate that they are low. With our values used as a reference this systematic presentation permits the direct comparison of the values of one investigator with those of another.

As explained in the literature review in Section 2, there exists only a small number of investigations of the index of refraction which can be used here. We will discuss these at this time, not necessarily in chronological order. We will specifically compute our interpolated results with those of Tornoe (1900), Krummel (1907), Utterback, Thompson and Thomas (1934), Miyake (1939), Rusby (1967), Mehu and Johannin-Gilles (1968), Bein, Hirsekorn and Moller (1935), and Vaurabourg (1921a). All of these studies present the value of the index of refraction (with respect to air), except for Rusby who presented the difference in index from 35%. Copenhagen Standard Seavater (refractive index anomaly), also with respect to air.

The data of <u>Utterback</u>, et al., (see Section 2), were originally in terms of chlorinity and have been converted to salinity using the relation given in Section 3. These are shown in parentheses in Table 5-1, together with values interpolated from our tables at Utterback's salinities and temperatures for the wavelength  $\lambda = 589.3$  nm. The numbers to the right of the index values show their difference in the fifth decimal place. The only observable trend is in that larger differences occur at 0°C. If it is recalled that at each temperature our values are a priori linear (see Figure 4-1), then Utterback's data either suggest very slight deviations from linearity or are contaminated by errors. Whichever the case may be, it is encouraging to observe that the maximum difference of 6 x 10<sup>-5</sup> in index is within the combined error margins, which are  $3 \times 10^{-5}$  for both our results and for Utterback's.

Comparison with <u>Miyake's</u> results (see Section 2) is shown in Table 5-2, where we have used the same relation for the chlorinity to salinity conversion, as with the data of Utterback. These measurements were made at 25°C with Sodium D-light (589.3 nm). The column showing the differences suggests that Miyake's data are quite erratic considering that our data are exactly linear. In our view, Miyake's real contribution was in demonstrating the additivity of refractivities of the major ionic constituents of seawater in producing the rise in index over that of pure water (see Table 3-1).

Table 5-1. Comparison of Utterback, et al. (1934) data with interpolated values of present study.

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		0°C	5 °C	10 °C	15 °C	20 °C	25 °C
Ct {‰}	\$ (¼)	Δη η x 10 <sup>0</sup>	Δn 6 x 108	<u></u> δη n x 10 <sup>s</sup>	Δr. n x 10 <sup>8</sup>	Δn n x 10 <sup>5</sup>	Δπ n x 10 <sup>5</sup>
1.477	2.667	1.33446 5. (1.32453)	1.33439 3.	1.33419 3.	1.33360 O. (1.33366)	1.33347 3.	1.33298 1.
3.004	5.549	1.33505 4. (1.33509)	1.33495 4. (1.33499)	1.33474 3. (2.33477)	1.33442 -1. (1.33441)	1.33400 4.	1233351 -1.
5.147	9.294	3.33578 4. (1.33504)	1.33547 3. (1.33570)	1.33544 3. (1.33547)	1.33511 3.	1.33463 2. (1.33470)	1.33418 3.
7.559	13-450	1.33444 4.	1.37.51 ). (1.23554),	1.33626 2. (11.33628)	1.33591 4. (1.23595)	1.33548 4. (1.33554)	1.33497 3.
9.075	16.367	1.33718 5. (1.33723)	1.33764 2. (1.33704)	1.33678 3. (1.33681)	1.33442 1. (1.33443)	1.33598 3. (1.33401)	1.33546 ~0. (1.33546)
10.47>	18.917	1.33748 4. (1.33774)	1.33752 2. (1.33754)	1.3372 <b>6</b> 3. (1.33724)	1.33489 3.	1.33444 3. (1.33447)	1.33592 3. (1.33595)
12.043	21.783	1.33424 5. (1.33429)	1.33808 1. (1.33809)	1.33780 2. (1.33782)	1.33742 3.	1.33494 4. (1.33700)	1.33444 4.
14.904	25.291	1.33493 4. (1.33497)	1.33875 2. 11.338773	1.33840 J. (1.33849)	1.33807 3. (1.33815)	1.33760 3., (1.33763)	1.33707 4. : (1.33711)
15.224	27.474	1.33134 5. (1.33941)	1.33918 0.	1.33688 0. (1.33688),	1.33848 -1. (1.33847)	1.33801 2. (1.33802)	1.33747 3. (1.33750)
16.750	30.244	1.33990 4. (1.33994)	1.33971 0. (1.33971)	1.33940 O. (1.33940)	1.33499 2. (1.33901)	1.33851 4. (2.33855)	1.33797 4. {1.33001}
18.778	34.305	1.34370 5. (1.34075)	1.34049 -2. (1.34047)	1.34017 0. (1.34017)	1.33974 3. (1.33977)	1.33925 2. (1.33927)	1.33870 4.
19.227	34.719	1.34078 4. (1.34682)	1.34057 -1. (1.34054)	1.34025 0. 11.34025)	1.33982 3. (1.33985)	1.33933 2.	1.33078 3.
21.361	38.498	1.34155 3. (1.34158)	1.34132 -1. (1.34131)	1.34008. 0. {1.34098}	1.34054 1. (1.34055)	1.34004 2. (1.34004)	1.33948 ).

NOTE: Utterback, et al. data in parentheses. Column under  $\Delta n$  shows the difference  $\Delta n \times 10^5$ .  $\lambda = 589.3$  nm, p = 9 (stmospheric).

Table 5-2. Comparison of Miyake (1939) data with interpolated values of present study.

		T = 25 °C	
टर (%)	\$ (%)	n	An x 10 <sup>5</sup>
0.0	0.0	1.33250	0.
1-900	3.431	1.33312 (1.33303)	-9.
3.790	6.844	1.33374 (1.33369)	-5.
5-660	10.220	1.33435 (1.33437)	2.
7.530	13.597	1.33496 (1.33498)	2.
9.370	16.970	1.33556 (1.33559)	3.
11.230	20.278	1.33617 (1.33629)	12.
13.970	23.601	1.33677 (1.33681)	4.
14,205	26.725	1.33733	9.
16.730	30.210	1.33796 (1.33812)	16.
18.540	33.478	1.33855 (1.33863)	8.

NOTE: Miyake data in parentheses. Last column shows the difference  $\Delta n \times 10^5$ .  $\lambda$  = 589.3 nm, p = 0 (atmospheric).

A comparison of another kind may be made with Rusby's date (see Section 2). His measurements represent the difference in index between a seawater sample and  $35\%_0$ . Copenhagen Standard Seawater (refractive index anomaly) and are accurate to the seventh decimal place  $(4 \times 10^{-7})$ . These data are the most accurate, as well as the most precise over taken for seawater. Whereas our data are accurate to only the fifth decimal place, a useful comparison can, nevertheless, be made. Tables 5.3(a) and 5.3(b) compare these data in two groups, i.e., for two different salinity series. The column labeled "Present Study" contains data, derived through interpolation of our tables, and provides the difference in index from that at  $35\%_0$  salinity. This column is presented with sixth-decimal-place precision, even though the accuracy is only to the fifth decimal place  $(3 \times 10^{-5})$ , in order to show the surprisingly small differences that were found. In all cases, between salinities of 33 and  $38\%_0$  the errors are below  $1 \times 10^{-5}$ ; an amazing agreement of values whose accuracy differs by two orders of magnitude. Note that an index difference of  $1 \times 10^{-5}$  corresponds to about  $0.05\%_0$  in salinity.

This comparison with Ausby's very accurate data, even though at only one wavelength and at a restricted range of temperatures and salinities, provides an assuring confirmation of the index increments as determined by our procedure using the data base of Mehu and Johannin-Gilles.

There are two points to be clarified here: First, in Table 5-3(a) at salinities below 33%, our values and Rusby's differ by more than one unit in the fifth decimal place. Rusby has stated that for salinities below 35% the standard deviation of his measurements was larger than above that value, but this cannot account for the entire difference. If the difference is real, it would appear that the index behaves in a slightly nonlinear manner for salinities below 33%, which in one sense may justify M-G's data (see Figure 4-1) which show a drop in index at around 26% salinity. This drop, however, recovers at lower

**Table 5-3.** Comparison of Rusby (1967) refractive index anomaly data with interpolated values of present study.

			20.	00°C			
\$ %.	Present Study x 10 <sup>5</sup>	Rusby 7 10 <sup>8</sup>	Difference An × 10 <sup>5</sup>	S •2,	Present Study x 10 <sup>5</sup>	Rusby x 10 <sup>5</sup>	Difference An x 10 <sup>5</sup>
30.867 31.299	-76.3 -68.4	-80.21 -71.62	-3.9 -3.2	35.000 35.053	0.0	0,0	-0.0 0.3
31.634 32.324 32.447	-62.2 -49.5 -47.3	-64.88 -51.48 -48.76	-2.7 -2.0 -1.5	35.148 35.335 35.392	2.6 6.1 7.2	2.87 6.27 7.42	0.3 0.2 0.3
32.787 32.984 33.133	-41.1 -37.4 -34.7	-42.35 -38.29 -35.43	-1.2 -0.9 -0.7	35.495 35.573 35.708	9.1 10.5 13.0	9.26 10.72 13.26	0.2 0.2 0.3
33.222 33.389 33.670	-33.0 -29.9	-33.85 -30.78	-0.9 -0.8	35.854 36.010 36.128	15.7 18.6 29.7	15.90 18.84 21.00	0.2
33.843 34.010	-21.5 -15.5	-21.86 -18.83	-0.4 -0.3	36.401 36.670	25.8 34.4	26.01 34.66	0.2
34.056 34.257 34.427	-17.6 -13.9 -10.7	-17.80 -14.08 -10.90	-0.2 -0.2 -0.2	37.073 37.170 37.571	38.2 39.5 47.4	38.26 40.21 47.10	0.0 0.3 -0.3
34.683 34.900 34.976	-6.0 -2.0 -0.5	-5.79 -1.74 -0.31	0.2 0.3 0.2	38.152 38.582 38.770	58.1 66.0 -69.5	57.59 65.34 68.75	-0.5 -0.7

Table 5-3 cont.

(b)  $\lambda = 546.1 \text{ nm}_{\odot} p = 0$  (atmospheric), T = 17.3, 20.1, 25.3; 30.1 °C. This is a different series of salinities than those of Table 5-3a. Blanks indicate no entries.

	17.30°C			20.10°C				25.30°C		30.10°C			
\$ %	Present Study x 10 s	Rusby x.10 <sup>5</sup>	Difference An x 10 <sup>5</sup>	Present Study x 10 <sup>5</sup>	Musby x 10 <sup>6</sup>	Difference, - An x 10 <sup>8</sup>	Present Study x 10 <sup>8</sup>	Rusby x 10 <sup>8</sup>	Difference on x 10 <sup>5</sup>	Freeent Study x 10 <sup>9</sup>	Ausby x 10 <sup>8</sup>	Difference An x 10 <sup>5</sup>	
33.827 34.082 34.242 34.254 34.747 35.000	-22.0 -17.3 -14.2 -14.1 -4.8 0.0 12.6	-21.94 -17.22 -14.27 -13.97 -4.82 0.0 12.64	0.1 0.0 -0.1 0.1 -0.1 -0.0 0.1	-21.6 -17.1 -14.0 -13.7 -4.8 0.0 12.7	-21.78 -17.07 -14.17 -13.77 -4.77 0.0 12.62	-0.1 0.0 -0.2 -0.0 -0.0 -0.0	-21.5 -16.9 -13.8 -13.6 -4.7 0.0 12.4	-21.61 -16.92 -14.03 -13.70 -4.71 0.0	-0.2 -0.0 -0.2 -0.1 -0.0 -0.0	-21.4 -16.8 -13.7 -13.5 -4.7 0.0 12.7	-21.46 -16.73 -13.81 -13.60 0.0 12.37	-0.1 .0.1 -0.1 -0.1	
35.898- 36.179 36.451 36.658 36.857 36.869	16.6 21.6 26.9 30.6 34.3 34.9	16.58 21.78 27.05 30.70 34.47 35.11	-0.0 0.1 0.2 0.1 0.1	16.7 21.7 26.8 30.5 34.2 34.8	16-58 21-74 26-81 30-62 34-38, 36-90	-0.1 -0.0: 0.0 0.1 0.1	16.3 21.6 26.5 30.3 34.0 37.5	16.37 0.0 26.53 30.24 34.01 34.68	0.0 -0.1 -0.0 0.2	16.5 21.7 26.5 30.2 34.0	16.23 26.36 30.01 34.25	-0.3 -0.2 -0.2 -0.2	

salinities as is seen in the same figure. It should be recalled here that we have ignored this behavior in building our tables. The second point is that in Table 5-3(b) at S = 36.857%, and  $T = 25.30^{\circ}$  C, Rusby showed that  $\Delta n = 43.01 \times 10^{-9}$ , which was obviously a typographical error as can be readily seen from the data trends. We have corrected this value to  $34.01 \times 10^{-5}$ .

Table 5-4 presents a comparison of <u>Krummel's</u> data (see Section 2) with our values (taken directly from Table A-3(h) in Appendix A), where the difference between the values is observed to change almost linearly. Any number of ransons could be proposed for this type of disagreement; however, it does not appear to be a temperatu/e effect. For pure water  $(S = 0\%_0)$ , Tilton and Taylor give a value of 1.3331584, as compared with Krummel's value determined many years earlier.

Table 5-4. Comparison of Krummel (1907) data with interpolated values of present study.

\$ %	Present Study	Krumssel	Δη x 10 <sup>5</sup>
0	1.33316	1.33300	-8
5	1,33408	1.33405	-3
:0	1:33499	1.33802	ã.
15	1.33591	1.33598	7
20	1,33683	1,23694	11
25	1.33774	1.33790	16
30	1.33866	1.33885	19
36	1.33964	1.33961	23
40	1,34050	1.34077	27

NOTE:  $\lambda = 589.3$  nm, p = 0 (atmospheric),  $T = 18^{\circ}$ C.

In Subsection 4.2 where the data of Mehu and Johannin-Gilles (see also Section 2) were presented (Table 4-1), it was stated that we eliminated their values at three chlorinities to obtain the data in Table 4-2 from which the tables in Appendix A were constructed. These data are compared with ours in Table 5-5, where the M-G data are shown in parentheses. We did not include the chlorinities 0 and 19.373%

Table 5-5. Comparison of previously ignored Mehu and Johannin-Gilles (1968) data with interpolated values of present study.

			1 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C
À	Ct .	s	/						
ns .	(%)	(%)	n An	n <u>A</u> s	n An	n An	n An	n An	n <u>A</u> n
404.7	4.887	8.829	1.34556 7.	1.3+545 6.	1.34522 6.	1.34488 5.	1.34444 4.	1.34393 2.	1.34333 2.
	9.603	17.348	(1.34563) 1.34731 -9.	(1.34552) 1.34717 -7.	(1.34528) 1.34691 -6.	(1.34493) 1.34654 -4.	(1.34448) 1.34607 -2.	(1.34395) 1.34556 0.	(1.34335) 1.34495 2.
i l	14.589	26.354	(1.34722) 1.34915 -12.	(1.34710) 1.34898 -11.	(1.34685) 1.34869 -13.	(1.34650) 1.34830 -16.	(1.34607) 1.34763 -20.	(1.34556) 1.34728 -22.	(1.34497) 1.34666 -23.
]			(3-34903)	(1.34887)	(1.34856)	(1.34814)	(1.34763)	(1.34706)	(1.34643)
435.5	4.887	E.829	1.34300 6.	1.34290 >.	1.34266 5.	1.34232 4.	1.34189 3.	1.34137 2.	1.34078 -0.
1	9.603	17.348	1.34473 -8.	1.34459 -5.	1.34433 -5.	1.34396 -4.	1.34351 -2.	1.34298 -0. (1.34298)	1.34238 1.
	14.589	26.354	1.34655 -12.	1.34639 -13.	1.34609 -14.	1.34569 -16.	1.34523 -19.	1.34468 -22.	1.34407 -22.
467.8	4.887	8.829	1.34090 6.	1.34980 >.	1.34057 4.	1.34022 4.	1.33974 3.	1.33928 2.	1.33870 -1.
	9.603	17.348	(1.34096) 1.34261 -7.	(1.34085) 1.34246 ~4.	1.34061)	(1.34026) 1.34184 -4.	(1.33982) 1.34139 -3.	1.339301 1.34087 -2.	(1.33869) 1.34028 -1.
	14.589	26.354	(1.34254) 1.34441 -12.	1.34244)	1.34217)	(1.34180) 1.34355 -16.	(1.34136) 1.34308 -17.	(1.34085) 1.34255 -20.	(1.34027) 1.34195 -22.
	12.304	20.354	(1.34429)	(1.34412)	(1.34381)	(1.34339)	(1.34291)	(1.34735)	(1.34173)
480.0	4.887	8.829	1.34020 6.	1.34010 5.	1.33987 4.	1.33953 4.	1.33910 3.	1.33859 1.	1.33801 -1.
	9-603	17.348	1.34191 -6.	1.34178 -5.	1.34151 -4.	1.34115 -4.	1.34070 -3.	1.34017 -1.	1.33958 -C.
]	14.589	20.354	1.34371 -12.	1.34355 -14.	1.34325 -15.	1.34286 -16.	1.340671	1.34(16)	(1.33958) 1.34174 -20.
			(i.34359)	(1.34341)	(1.34310)	(1.34270)	(1.34221)	(1.34165)	(1.34104)
508.5	4.887	8.629	1.33876 5.	1.33866 >.	1.33443 4.	1.33810 4.	1.33767 3. (1.33770)	1.33716 2. (1.3371H)	1.33658 1.
	9.603	17.348	1.34046 -5.	1.34033 -4.	1.34006 -4.	1.33970 -4. (1.33966)	1.33925 -3.	1.33874 -2.	1.33814 -0.
	14.589	26.354	1.34225 -13. (1.34212)	1.34209 -14. (1.34195)	1.34178 -15.	1.34139 -15.	1.34092 -17.	1.34039 -19. (1.34020)	1.33979 -20.
546.1	4.887	8.629	1.33718 5.	1.33708 4.	1.33485 5.	1.33651 4.	1.33609 3.	1.33559 2.	1.33501 1.
}	9.603	17.348	1.337231	(1.33712) 1.33873 -2.	(1.33690) 1.33847 -3.	1.336551	(1.33612) 1.33767 -3.	(1.33561) 1.33714 -1.	(1.33502) 1.33656 -0.
•	14.589	26.354	(1.33884) 1.34064 -12.	(1.33671) 1.34047 -13.	(1.33944) 1.34618 -14.	().33607) 1.33979 ~17.	1.33764)	(1.33714) 1.33879 -18	11.336561 1.33820 -20.
			(1.34052)	(1.34034)	(1.34004)	(1.33962)	(1.33915)	(1.33661)	(1.33000)
577.0	4.687	8.829	1.3360# 4. (1.33612)	1.33598 5.	1.33575 4.	1.33542 5.	[.33499 2. (1.33507)	1.33449 2. (1.33451)	1.33392 1.
	9.603	17.348	1.33775 -2.	1.33763 -1. (1.33762)	1.33736 -?. (1.33734;	1.33700 -2,	1.33655 -2.	1.33603 -1.	1.33546 1.
1 !	14-589	26.354	1.33952 -13. (1.33939)	1.33937 -1>.	1.33906 -15.	1,33467 -17.	1.33020 -17.	1.33767 -18.	1.33709 -70.
579.1	4.827	8.829	1.33601 4.	1.33591 5.	1.33569 4.	1.32535 2.	1.33492 3.	1.33442 ž.	1.33385 1.
	9.603	17.348	1.336051	(1.33596)   1.33756 -1.	(1.33973) 1.33730 -2.	1.335361	(1.33495) 1.33648 -3.	(1.33444) 1.33597 -2.	(1.33386) 1.33539 1.
]	14.589	26.354	(1.33766) 1.33945 -13.	(1.33755) 1.33930 -1	(1.33728) 1.35900 -15.	1.336911	(1.33646) 1.33813 -18.	(1.33595) 1.33760 -18.	(1.33540) 1.33702 -20.
			(1.33932)	(1.33915)	(1.336#5)	(1.33643)	(1.337961	(1.33742)	(1.33682)
589.3	4.887	8.829	1.33568 5.	1.33558 >.	1.33536 4.	1.33502 4.	1.33460 3.	1.33409 J.	1.33353 1.
	9.603	17.348	1.33735 -1.	1.33722 -0.	1.33696 -1.	1.33660 -2.	1.33615 -2.	1.33564 -1.	1.33506 1.
1	14.559	26.354	1.33911 -12.	1.33896 -15.	1.33866 -15.	1.33827 -17.	1.33780 -17.	1.33726 -17.	1.33668 -19.
643.8	4.887	8.829	1.33413 6.	1.33403 5.	1.33380 5.	1.33248 4.	1.33306 3.	1.33256 3.	1.33199 2.
	9.603	17.348	(1.33419) 1.33579 1.	(1.33408) 1.33566 -0.	(1.33385) 1.33540 -0.	1.333521	(1.33309) 1.33461 -2.	(1.33259) 1.33409 0.	(1.33201) 1.33351 1.
	14.589		(1.33580: 1.33755 -13.	(1.33566) 1.33739 -15.	(1.33540) 1.33709 -16.	(1.33504) 1.33671 -17.	(1.33459) 1.33624 -17.	(1.33409) 1.33571 -17.	(1.33352) 1.33511 -17.
		1	(1.33742)	(1.33724)	(1.33693)	(1.33654)	(1.33407)	(1.33554)	(1.33494)
<u> </u>	<u> </u>	L	<u> </u>	<u> </u>	l	l	<u> </u>	t	

NOTE: Mehu and Johannin-Gilles data in parentheses. Column under  $\Delta n$  shows the difference  $\Delta n \times 10^5$ . The systematic trends of  $\Delta n \times 10^5$  are evident, as also shown in Figure 4-1. p = 0 (atmospheric).

since our values are actually the same as theirs. The second column for each temperature contains the difference Anix 105 between our values and theirs. The striking feature of this column is the very systematic distribution of the differences according to salinity, as shown also in Figure 4-1 where our values are shown by the straight lines, and the differences  $\Delta n \times 10^5$  represent the distance of the points from the lines. This systematic behavior holds at all wavelengths, with the Δn x 105 discrepancies being positive at S = 8.829%, small positive and negative at S = 17.348%, and much more negative at S = 26.354%. There is also a tendency for  $\Delta n \times 10^5$  to decrease algebraically (i.e., not in absolute value) as the temperature increases. In our work we have assumed that the dependence of the index of refraction on salinity is linear up to 43%, a premise that originated from the works of Utterback, et al., Miyake, and even M-G themselves. One cannot, however, completely ignore the fact that the differences  $\Delta n \times 10^5$ in Table 5-5 repeat themselves at all wavelengths and with the same systematic behavior, and that they are greater than the stated accuracy of "within" 3 x 10<sup>-5</sup>. There is always the possibility that the same seawater samples were used at all wavelengths and that their chlorinity was not properly determined. If that were true, however, in Figure 4-1 the points would be equally distant from the lines, horizontally, at any particular salinity, which is not the case. The same figure shows the discrepancies to be greatest at the salinity of 26.354%, (C1 = 14.589%), which would indicate a nonlinear salinity dependence of index in a region around this value. In the comparison with Rusby's data, Table 5-3(a), there is an indication of this nonlinear behavior for salinities of 32.787 to 30.867% (considering that our values in this table are linear), but we cannot be sure this is a real trend, and Rusby's values, unfortunately, do not extend to any lower salinities. This nonlinearity certainly does not appear in Table 5-1 where the Utterback, et al., data are compared, or in Table 5-2 where the Miyake data are compared.

Such considerations as these prompted us to accept a priori a linear satinity dependence of the index of refraction. Nevertheless, the suspicion remains that the index curves may not be linear with salinity, but the accuracy and the precision of existing measurements and/or their limited coverage do not, as yet, permit resolution of this question.

We next turn to  $\underline{\text{Tornoe}}$  (1900) (see Section 2) who took his measurements using a variation of the Halwachs method. Since he was interested in obtaining salinity from the refractive properties of seawater, he presented his results in terms of the refractive angle  $2\alpha$  measured on his apparatus, which is related to the index of refraction of pure water  $n_w$  and seawater  $n_s$  by the formula

$$(n-1) = \frac{\sin^2 \alpha}{n_w^2 \cdot (n+1)}$$
 where  $n = \frac{n_u}{n_w}$  (5.1)

which may be more simply written,

$$n_s = \sqrt{n_w^2 + \sin^2 \alpha} . ag{5.2}$$

Tornoe's work consisted in gravimetrically determining the salinities of his samples (see below), and then measuring the refractive angle 2a while varying temperature for each sample. From these data he developed two formulae, one relating the index to salinity and the other the index to specific gravity (the latter taken from Knudsen's Tables). These are

$$\log n_{17.5} = 6.14340 \text{ S} - 0.00006 \text{ S}^2$$
 at T = 17.5°C (5.3)

and

$$n_t - n_{17.5} = 0.216 (y_t - y_{17.5})$$
 at any T (5.4)

where S is salinity,  $n_t$  is the ratio  $n_a/n_w$  at some temperature t and  $n_{17.5}$  is the same ratio at 17.5°C,  $\gamma_t$  is the ratio of specific weights of seawater at temperature t to pure water at temperature t, and  $\gamma_{17.5}$  the same ratio at 17.5°C. No mention is made of how these formulae were obtained; but if they were derived from his data, temperature does not appear to have been adequately covered for most of the salinities (see below). From the above formulae, Tornoe developed numerical tables providing the dependence of  $2\alpha$  on salinity (9.84 to  $38.45\%_0$ ) and temperature (6 to  $22^{\circ}$ C). To check the validity of these tables, he reversed his procedure and computed the salinities by using his original measurements of  $2\alpha$  and his tables. The results of his 73 comparisons indicated discrepancies between computed and measured salinities of less than  $0.05\%_0$  for 59 pairs, and up to  $0.07\%_0$  for only 4 pairs, with an average error of  $0.027\%_0$ , which is very good indeed, considering the procedures available for these measurements 75 years ago.

The original determination of the salinities, done gravimetrically, was computed from the empirical relation (see Tornoe, 1895)

$$S = 1315 (\gamma_{17.5} - 1) . (5.5)$$

However, according to Riley and Chester (1971) (see Section 3), this gravimetric "salinity" of Tomoe and the Knudsen sclinity should differ by 0.45 percent. In the comparison presented in Table 5-6, between our values and Tornoe's, his salinities were taken at face value and this adjustment was not made. We do comment, however, on what the difference would be.

As is shown in Table 5-6, at two salinities a wide temperature range is covered, but at the other salinities the temperatures bracket 17.5°C, which was the generally accepted "standard room temperature" at that time. The differences between our values and Tornoe's, expressed as  $\Delta n \times 10^5$ , are impressively small, with better agreement at the lower temperatures. When as an exercise, we adjusted Tornoe's salinities by the above mentioned 0.45 percent, the differences were reversed, with the agreement at the higher temperatures (above 14°C) being better than one unit in the fifth decimal place, and up to three units at the lower temperatures, which is also an acceptable result; i.e., within our  $3 \times 10^{-5}$  accuracy, even though Tornoe's accuracy is not specified.

Table 5-6. Comparison of Tornoe (1900) with interpolated values of present study.

(a)  $\lambda = 589.3 \text{ nm}$ , p = 0 (atmospheric), S = 33.86%

(b)  $\lambda = 589.3$  nm, p = 0 (atmospheric), S = 34.64%

		s = 33.86 <b>%</b>		1		s = 34.64 °4	,
т℃	Present Saudy	Tornoe	Δn x 10 <sup>5</sup>	τ%:	Present Study	Tornoe	Δn
7.1	1.340285	1.340290	0.5	5.9	1,340508	1.340516	
7.6	1.340254	1.340259	0.5	6.5	1.349471	1.340475	
7.0 7.7	1.340246	1.340247	0.5		1.340442	1.340456	
8.1	1:340219	1.340223	0.1	7.0 7.4	1.340417	1.340429	
8.2	1.340214	1.340209	-0.5	7.4	1.340389	1.340393	
8.6	1,340185	1.340191	0.6	9.9	1.340239	1.340244	
8.9	1.340164	1.340168	0.4	10.0	1.340235	1.340239	
10.9	1.340013	1.340018	0.6	10.2	1.340215	1,340239	'
11.0	1.340004	1.340012	0.8	10.4	1.340199	1.340209	
14.0	1.339747	1.339752	0.5	14.8	1.339820	1.339855	:
14.1	1.339739	1.339756	1.7	15.4	1.339764	1.339798	
14.3	1.339721	1.339737	1.6	16.0	1.339706	1.339753	
14.8	1.339675	1.339699	2.4	16,5	1.339660	1.339708	
17.4	1.339429	1.339453	2.9	17.2	1.339592	1.339623	
17.6	1.339410	1.339440	3.1	17.5	1.339561	1.339599	
17.7	1,339399	1.333432	3.2	17.7	1.339542	1.339581	
17.8	1.339390	1.339433	4.3	17.9	1.339572	1.339563	•
18.1	1.339360	1.339402	4.2	18.1	1.339502	1 339535	
18.3	1.339340	1.339379	3.9	18.3	1.335482	1.339518	
18.7	1.339300	1.339343	4.3	20.2	1.339290	1.233329	
21.1	1.339051	1.339086	3.4	20.3	1.339278	1.339311	
21.3	1.339030	1.339064	3.3	20.4	1.339269	7.339295	•
21.5	1,339008	1.339040	3.1	20.6	1.339248	1.339268	İ

(c) Tornoe data in parentheses. Column under  $\Delta$ n shows difference  $\Delta$ n x 105.  $\lambda$  = 589.3 nm, p = 0 (atmospheric). Blanks indicate no entries.

	S= 10.14	%	S = 20.02	%:	S = 25.02	%,	S = 29.97	%,	S = 31.96	٠/,,	S = 33.00	%,	S = 36.02	%
т℃	n	Δn	n	Δn	n	Δn	n	Δn	n	Δn	п	Δπ	រា	Δπ
17.0					1.337839 (1.337865)	2.6							1.339666 (1.339890)	2.4
17.2			1.336903 (1.336920)				1.338735 (1.338761)	2.7			1.339291 (1.339327)	3.6		
17.3					1.337812 (1.337838)	2.6								
17.4	1.3350 <del>69</del> (1.335086						1.338716 (1.338745)	3.0	1.339083 (1.339110)		1.339272 (1.339303)		1.339827 (1.339858)	
17.5					1.337793 (1.337825)		1.338705 {1.338737)							
17.6			1.336866 (1.336886)						1.339064 (1.339092)		1.339252 (1.339284)			
17 <b>.7</b>	1.335043 (1.335062)										ĺ			
17.8									1.339044 (1.339075)				1.339787 (1.239817)	
17.9									1.339033 (1.339066)		1.339223 (1.339256)			
18.0													1.339767 (1.339803)	

Recalling that our values are linear with satisfy and observing the size of the differences  $\Delta n \times 10^5$  at around 17.5°C, we do not comprehend Tornoe's reasons for developing the above nonlinear relationship, which can be rewritten as

$$n_{\mathbf{g}_{17.5}} = n_{\mathbf{w}_{17.5}} 10^{(6.14340 \,\mathrm{S} - 0.00006 \,\mathrm{S}^2)}$$
 (5.6)

We find that the above nonlinear relationship with the two empirical coefficients, and our assumed linear relationship  $n_a = n_w + aS$  (at some temperature) with the one-empirical constant a, agree quite well in numerical terms. Thus we believe that the simpler linear relationship is better qualified to represent the dependence of the index of refraction on salinity. Tornoe used pure water data taken from Rosetti's Tables which appeared in Landolt-Bornstein, while we have used the more accurate Tilton and Taylor data.

It is therefore concluded that even Tornoe's data suggest the linear relationship of index and salinity, within the 3 units in the fifth-decimal-place accuracy which we have claimed throughout.

We now turn to two sets of measurements of the index of refraction of seawater, which have been characterized by specific gravity and temperature, rather than salinity and temperature. These are the works of Bein, Hirsekorn, and Moller (1935) and of Vaurabourg (1921b). Bein, et al., have used the parameter  $\rho_{17.5}$  (see Eq. 3.9) to essentially characterize salinity, while Vaurabourg used  $\sigma_0$  (see Eq. 3.8). From Knudsen's Tables, which provide the correspondence between salinity,  $\rho_{17.5}$  and  $\sigma_0$ , we have converted directly to salinity before proceeding to compare with our values.

In the work of Bein, et al., (see Section 2) measurements of the refracting angle  $\alpha$  were first made using the Halwachs appearatus, and these were used to calibrate an interferometer which was subsequently used to measure  $\rho_{17.5}$  directly. We will ignore here the "derived" interferometric data and concentrate only on the basic Halwachs method. This necessitates knowledge of the index of pure water  $n_w$  and of the refracting angle  $\alpha$  to compute the index of seawater, through

$$n_{\rm a} = \sqrt{n_{\rm w}^2 + \sin^2 \alpha} \tag{5.7}$$

which was also used by Tornoe. For the comparison with our values, we have used the measured angles,  $\alpha$ , from Bien, et al., and values from Tilton and Taylor (1938) for the index of pure water  $n_w$ . In the measurements of Bein, et al. 11 seawater samples were examined at different temperatures, at the four heliumlines 447.1, 501.6, 587.6, and 667.8 nm. The actual apparatus used was a very elaborate version of the Halwachs method which could measure angles to a few seconds of arc, corresponding to the sixth decimal place in index (5 seconds corresponded to approximately  $3 \times 10^{-6}$  in index). The comparison of the values of index of refraction of seawater as computed above with our interpolated values is shown in Table 5-7. It should be pointed out that at 667.8 nm our values are extrapolated. It is evident from this table that the observed differences are not randomly distributed, since for 29 of the 31 pairs, the values of Bein,

Table 5-7. Comparison of Bein, et al. data with interpolated values of present study.

				447.1 nm		501.6 mm 567.6 mm;						967,8 pm		
eu,	2 (*)	; °C	Present Study	Boss et al.	An v 103	Present Study	Bein et el.	30 x 10 <sup>5</sup>	Present Sindy	Bein er ol.	30 x 105	Present Study	Bein et al.	Le x 105
23.63H 25.651 24.624	32.248 33.310 34.325 35.278 35.316 36.376 37.788	19.76 14.79 16.72 16.74 18.47 17.09 17.76 18.37	1.345589 1.345323 1.345322 1.345022 1.34602 1.346252 1.346259 1.346409 1.346550 1.346752 1.346575	1.345925 1.346135 1-44325 1.346335 1.346484 1.346621	7.3 7.3 7.2 6.7 7.5 7.1	1-342412 1-342140 1-342138 1-342671 1-342677 1-343064 1-343074 1-343217 1-343533 1-343533 1-343533	1.342478 1.342209 1.342738 1.34279 1.342738 1.343130 1.343130 1.343140 1.343077 1.343425 1.343673	6.6 6.9 7.1 6.7 6.8 7.1 6.6 -14.0 7.2 7.2 7.1	1.339916	1.338791 1.338791 1.339312 1.339515 1.339699 1.339700 1.339851 1.339984	6.4 7.1 6.4 6.6 6.3 6.4 6.7	1-336761 1-336490 1-336481 1-337014 1-337399 1-337399 1-337543 1-337664 1-337663	1-337831 1-337749 1-337943	28.8 7.5 7.7

NOTE: Salinities obtained from Knudsen's Tables (1901). p = 0 (atmospheric).

Blanks indicate no entries.

et al., are higher by 6 or  $7 \times 10^{-5}$  in index. Discrepancies above  $10 \times 10^{-5}$  we attribute to erroneous reporting. We recognize that the discrepancies between the index values of Bein, et al., and our own are of the order of  $7 \times 10^{-5}$ , but we cannot provide an explanation — especially since Bein's data are supposed to provide sixth decimal place accuracy. It would seem that the source of these almost-constant differences lies in some systematic experimental errors, which were not accounted for by Bein, et al., or by the choice of  $n_w$ .

Before proceeding, some comments are in order on the tables computed by Saint-Guilly (1954), which are based on Bein's, et al., interferometric data, which we have not considered here. These were expressed as the difference in index between seawater and pure water  $(n_a - n_w)$  through

$$n_{x} - n_{w} = \frac{0.00024168 \cdot \rho_{17.5}}{1 \pm A_{s}}$$
 (5.8)

(to be found on p. 161 in Bein's work), where  $A_t$  provides a temperature correction, and  $A_t = 0$  at 20°C. According to Bein this relation holds for "white-light" or "He-yellow" (587.6 nm), but he also mentions that the compensation point for the interferometer (which employed "white light") corresponds to 559 nm, which is very confusing. What Saint-Guilly did was to take the values of  $n_w$  from Tilton and Taylor (1938) at the completely unrelated wavelength of 589.3 nm (Sodium D-lines) and add the  $n_s - n_w$  of Bein, et al. We strongly object to this apparently arbitrary combination of data valid at different wavelengths, and we would like to caution users of Saint-Guilly's tables as to their validity.

As a final comparison with earlier work, we consider <u>Vaurabourg's</u> data (1921a,b). This work was undertaken in conjunction with Thoulet (1921) who was more interested in the descriptive oceanography than in the physical constants. The data presented in <u>Vaurabourg</u> (1921a) include the correspondence of density to index of refraction at given values of  $\sigma_0$ , in 5°C temperature increments at the Sodium D-rines (589.3 nm). A total of eight seawater samples were measured, plus a pure water sample. In his 1921b paper the same data are presented but interpolated to temperature increments of 1°C, and some numerical values have been changed by at least one unit in the fifth decimal place. A much greater discrepancy

than found with earlier comparisons is evident in Table 5-8. Utterback, et al., criticized Vaurabourg's data, which they found to be high, and attributed the discrepancies to the Fery and Zeiss refractometers which were used and which, according to Utterback, et al., can only provide the index to the fourth decimal place, even though Vaurabourg presented five. Because of this, we do not consider this comparison to be valid and present it only for the sake of completeness.

Table 5-3. Comparison of Vaurabourg (1921) with interpolated values of present study.

		ů		5°C		10°C		15°C		20 °C		25 °C		30 °C	
٠,	ائد) د	n	Δn x 10 <sup>5</sup>	ń	Δn x 10 <sup>5</sup>	n	Δη x 10 <sup>5</sup>	n	۵n x 10 <sup>5</sup>	n	∆n × 105	n	ેડા x 10 <sup>5</sup>	ล	An x 10 <sup>5</sup>
0	0.0	1.53395 (1.33406)	11.	1.33388	7.	1.33369 (1.33374)	5.	1.33339 (1.33343)	4.	1.33299 (1.33303)	4.	1.33250 (1.33255)	5.	1.53194 (1.33200)	6.
4	5.04	1.33494 (1.33507)	13.	1.33485 (1.33494)	9.	1.33464 (1.33470)	6.	1.33432 (1.33437)	5.	1.33391 (1.33396)	5.	1.33341 (1.33347)	6.	1.33284 (1.33291)	7,
8	9.98	1.33592 (1.33604)	12.	1.33580 (1.33589)	9.	1.33557 (1.33565)	8.	1.33524 (1.33530)	6.	1.33481 (1.33488)	7.	1.33430 (1.34389)	958.	1.33373 (1.33382)	8.
12	. 14.94	1.33689 (1.33702)	13.	1.33676 (1.33685)	9.	1.33651 (1.33660)	9.	1.33615 (1.33624)	9.	1.3357? (1.33551)	9.	1.33520 (1.33530)	10.	1.33463 (1.33473)	10.
16	19.92	1.33787 (1.33800)	12.	1.33772 (1.33781)	9.	1.33745 (1.33753)	8.	1.33707 (1.33718)	10.	1.33662 (1.33673)	11.	1.33610 (1.33622)	12.	1.33552 (1.33564)	12.
20	23.00	1.33885 (1.33897)	12.	1.33868 (1.33877)	9.	1.33839 (1.33848)	9.	1.335G0 (1.338ll)	11.	1.33753 (1.33766)	13.	1.33700 (1.33713)	13.	1.33642 (1.33655)	13.
24	29.58	1.33983 (1.33995)	12.	1.33964 (1.33973)	9.	1,33933 (1,33943)	10.	1.33892 (1.33905)	13.	1.33844 (1.33858)	14.	1.33790 (1.33805)	15.	1.33731 (1.33746)	14.
28	34.85	1.34081 (1.34092)	11.	1.34060 (1.34069)	9.	1.34027 (1.34038)	11.	1.33984 (1.33999)	15.	1.33935 (1.33951)	16.	1.33880 (1.33897)	17.	1.33821 (1.33836)	15.
32	39.79	1.34178 (1.34190)	12.	1.94155 (1.34165)	10.	1.34120 (1.34133)	13.	1.34076 (1.34092)	16.	1.34025 (1.34043)	18.	1.33969 (1.33988)	19.	1.33910 (1.33927)	17.

NOTE: Vaurabourg data in parentheses. Column under  $\Delta n$  indicates the difference  $\Delta n \times 10^5$ . Large discrepancies due to Vaurabourg's reduced accuracy ( $\approx 1 \times 10^{-4}$ ).  $\lambda = 589.3$  nm. p = 0 (atmospheric).

This completes the comparisons between our work and the work of previous investigators. It is difficult to determine whose measurements more accurately represent the physical quantity of the index of refraction — the Utterback, et al. data appear to be slightly high; Miyake and Krummel indicate lower values at low salinities and higher values at higher salinities. The agreement with the refractive index anomaly of Rusby is excellent, while comparison with M-G's discarded data raises some questions. Finally, the comparison with Bein, et al., and with Vaurabourg implies their values are high.

However, our contribution through this study is the construction of a composite body of data which yields complete coverage of the index of refraction surface, is internally self-consistent, and has the physically gratifying property of smooth functional dependence on the parameters salinity, temperature, wavelength, and pressure. We believe we have retained the accuracies of the investigators whose data we have used and the above comparisons demonstrate, within their limitations, that this may very well be so.

The tables presented in Appendix A should be more than adequate for most engineering applications and can also serve as a basis for evaluating the potential of the methods that could be employed to measure salinity or specific gravity for oceanographic work.

# 6. REQUIREMENTS FOR THE DETERMINATION OF SALINITY AND SPECIFIC GRAVITY (DENSITY) USING THE INDEX OF REFRACTION OF SEAWATER

In this section we consider a subject that has been constantly recurring in the oceanographic literature — namely that of using the index of refraction to obtain other properties of seawater (salinity, specific gravity). This subject raises two questions, (1) whether the sought-after relationship is meaningful (i.e., single valued, with small variance, etc.) and (2) whether such a relationship can be routinely measured with sufficient accuracy to comprise an alternative to presently accepted methods of obtaining salinity and specific gravity. Specific gravity will be considered here in the form of  $\sigma_{\rm t}$  (defined in Section 3), i.e., at atmospheric pressure.

Let it be stated at the outset that the reason specific gravity is generally employed instead of density is because specific gravity is a relative quantity\* and can be measured more easily than density. As a matter of fact, the determination of the (absolute) density of seawater has not as yet been accomplished, and is a subject occupying the Joint Panel on Oceanographic Tables and Standards under the sponsorship of UNESCO.

The presently accepted, most accurate method of obtaining the salinity is through the conductivity ratio, i.e., the ratio of electrical conductivities between a seawater sample and Copenhagen Standard Seawater, preferably at 15°C (to suppress degassing). This method enables the determination of salinity to 0.001%. Present-day routine methods need not be as precise but they must be more precise than 0.01%.

In order to obtain values of specific gravity  $\sigma_t$  to an accuracy of 0.001 it is also necessary to measure temperature to an accuracy of  $\pm 0.001$  C. For routine methods, however, an accuracy of slightly better than 0.01 in  $\sigma_t$  is sufficient.

<sup>\*</sup>Specific gravity is the ratio of the density of a seawater sample at some temperature t to the density of pure water at 4°C and is a dimensionless quantity.

The distinction between a laboratory measurement which establishes a relationship and the routine measurements which use it must be made, since the required accuracy is approximately an order of magnitude greater for the former-than for the latter.

Preliminary to our discussion, it is assumed that any such relationship will be established at atmospheric pressure, so that the pressure will not be considered as a variable. In addition, the index of refraction measurements must be performed at a generally accepted wavelength. Most of the early work favored the Sodium D-lines (589:0 and 589:6 nm, with the mean value 589:3 nm) which are a doublet and are unsuitable for the present purpose. Rusby (1967) has used the green Hg-line (546:227 nm in vacuo) which we consider to be a good choice.

#### SALINITY TO INDEX OF REFRACTION RELATIONSHIP

A quick reference to Table A-3(e) in Appendix A indicates that a typical salinity gradient is dn/ds = 0.0002 per unit of salinity (1%<sub>o</sub>). Therefore, in order to obtain salinities to 0.001%<sub>o</sub> it is necessary to measure the index of refraction to 0.0000002, i.e., two units in the seventh decimal place, and this under a temperature control greater than 0.01°C.

If this could be done in a laboratory experiment to establish a good relationship with little scatter in the correlation, then routine methods for the determination of salinity to 0.01 % need only be accurate to 0.000002, i.e., two units in the sixth decimal place. This places awesome demands on the measurement of the index of refraction. A more convenient method is to measure the refractive index anomaly, i.e., the difference in index between a sample and Copenhagen Standard Seawater, which Rusby has so successfully (and laboriously) done to an accuracy of 0.0000004, i.e., four units in the seventh decimal place (see Sections 2 and 5). With this accuracy and with temperature control better than 0.01°C the relationship of index of refraction to salinity can provide salinities to 0.002%. This is exactly what Rusby did, and developed a polynomial expression providing salinity (from the refractive index anomaly and the temperature) with a standard deviation of about 0.0055% (see Section 5). To employ this relationship for routine determinations of salinity, an interferometric instrument would be required and perhaps a more compact one than was used by Rusby. The problems that would arise - those of temperature control of the the two fluids, of the precise knowledge of the container lengths, of the stability of the whole apparatus over the long term, of counting the fractions of interference fringes, etc. - pose an interesting challenge to optical engineering. Such an instrument has been built and used by Russian scientists (Vel 'Mozhnaya, 1960) but the mean accuracy in salinity is from 0.01 to 0.05% depending on the size of the cuvette containing the fluids. Improvement of this instrument could possibly provide the answer for routine work. The above author states that the use of his instrument is "simple and most convenient."

Much less accurate measurements using the index of refraction have been undertaken by Williams, Farrugia, Ekker, and Haden (1964) who have amployed a differential refractometer to obtain chlorinity in brackish Louisiana waters. They claim the refractive index anomaly can be measured to  $\pm 2 \times 10^{-6}$  which is an amazing accuracy for a small portable standard (non-interferometric) refractometer. The instrument uses a very small quantity of seawater but it unfortunately permits some evaporation to take place, which considerably reduces its real accuracy. Behrens (1965) has also discussed a refractometer of low accuracy ( $\sim$ 1%0) but of very great range (0 to 200%0) to be used in tidal pools and brines of enclosed waters. It

is an inexpensive instrument to be used for crude determinations and is certainly inadequate to meet the requirements exposed above.

#### SPECIFIC GRAVITY (o.) TO INDEX OF REFRACTION RELATIONSHIP

To determine a correspondence between index of refraction and  $\sigma_t$ , two possible methods exist. The first would measure the temperature and then the salinity using the index of refraction as described above, and then indirectly compute  $\sigma_t$  through the analytical expression provided by Cox, McCartney and Culkin (1970). This would perhaps be the simplest way. The second would actually perform simultaneous measurements of specific gravity and of the index of refraction at the same temperature in order to develop a direct relationship between the two. To obtain  $\sigma$ , to 0.001 (i.e., specific gravity to 0.000001) it is necesary to measure the index to  $2 \times 10^{-7}$  and the temperature to better than 0.01°C. Here again a comparative method, based on the difference from Copenhagen Standard Seawater would greatly facilitate matters, but is not as simple as was the case with satinity. Having established a relationship between index and  $\sigma_{**}$ an interferometer could be calibrated so as to provide  $\sigma_t$  directly when the temperature is known. The application of this method would be fraught with the same difficulties as would be that for the determination of salinity, mentioned above. Bein, et al. (1935), see Sections 2 and 5, actually developed such an interferometer which provided values of the parameter  $\rho_{17.5}$  (see Eq. 3.9) for which temperature corrections could be obtained from an accompanying table. Measurements obtained in this manner were reported to 0.001 with the implication that  $\rho_{17.5}$  and, therefore, also  $\sigma_{\rm t}$  can be determined to the same accuracy. (See Eq. 5.8.)

We do not have much faith in the possibilities of an interferometer to directly provide values of  $\sigma_{i}$  to this great accuracy (not just precision), and our reasons are explained below. If, however, we are proved wrong and this procedure can be put into practice, it would signify considerable progress and greatly improve oceanographic procedures. Should such a breakthrough be achieved, the construction of a similar underwater instrument could be envisioned. It would be used in much the same way as today's CTD (conductivity/temperature/depth meter) is employed to obtain measurements in situ.

#### RELEVANCE OF INDEX MEASUREMENTS FOR OCEANOGRAPHIC PURPOSES

We now return to the more fundamental question mentioned earlier, of whether a relationship between the index of refraction and salinity or specific gravity can actually be meaningful, i.e., whether actual measurements will have very little scatter around some functional relationship that could provide salinity to  $\pm 0.001\%$  or  $\sigma_t$  to  $\pm 0.001$  when the index of refraction is measured to two units in the seventh decimal place.

The principal difficulty lies with the problem of constancy of composition of seawater (see Section 3). To attain the accuracies stated above, it is obvious that all ionic constituents contributing more than one part per million by weight must retain a constant concentration ratio with respect to the Cl ion. This includes quite a large number of chemical species, the must important of which are Cl, Na, SO<sub>4</sub>, Mg, Ca, K, HCO<sub>3</sub>, Br, Sr, B, F, (Riley & Chester, 1971).

<sup>†</sup>or the refractive index anomaly

The composition is actually only approximately constant but it holds better in the open oceans where the salinities range only between 3% and 37%, than it does in coastal regions where dilution with river water occurs. River water as a rule/contains very little CL, and the ratios of SO<sub>4</sub>/CL, HCO<sub>3</sub>/CL, K/Na, Mg/Na, Ca/Mg are much greater than in seawater. Thus, the composition of the Baltic and Black Seas is appreciably altered. The deep ochans also have a higher Ca/CL ratio and also possibly a higher Mg/CL ratio. In anoxic basins SO<sub>4</sub>/CL is decreased, due to the increase in sulphide. Freezing (sea ice) also tends to fractionate the elements of seawater. In addition, precipitation and dissolution of carbonate minerals (e.g., the Bahama Banks), submarine volcanism (e.g., the oceanic ridges), admixture with geological brines (e.g., the Red S/A), all tend to alter the composition of seawater. Evaporation in isolated basins and exchange of ions with the atmosphere also have an appreciable effect on seawater composition.

From another point of view, the isotopic composition of the water itself can be of importance for precision work (Cox, McCartney, Culkin, 1958) and the amount of dissolved gases also affect the composition to some extent.

Because of these factors, all of which contribute to the alteration of the composition of seawater which in turn affects the various physical properties in different ways leading to noninvariant relationships, the validity of a direct relationship between index of refraction and salinity or specific gravity (to some specified accuracy) must be very carefully examined.

It should also be noted that even though an increase in the number of ions in seawater generally contributes to an increase in index, salinity, and specific gravity, the Mg ions contribute negatively to the index of refraction (see Table 3-1). This makes the requirement of constancy of composition all the more evident.

As an indication of conditions in actual practice, Rusby's (1967) work may serve as an example, (see Sections 2 and 5). In his work a third-degree polynominal fitted to the data to relate refractive index anomaly to salinity, showed a standard deviation in S of 0.0055% from the experimental points. However, the maximum deviation of the computed values from the true — as contrasted with the experimental values — is supposed to be less than this. It was also found that larger deviations appeared below S = 35%. Rusby stated that for routine application of refractive index measurements to derive salinity, the single most important factor is the water handling problem — transfusion, rinsing of containers, contamination, and evaporation — the errors from which are almost impossible to quantify.

# 7. EXAMPLES FOR USING THE INDEX OF REFRACTION TABLES

The tables of the index of refraction of seawater have all been placed in Appendix A for ease of reference. Their use is quite straightforward, and linear interpolation between the listed values is satisfactory throughout.

Tables A-1(a) through (p), A-2(a) through (j), and A-3(a) through (i) apply for a given constant wavelength and provide the index of refraction for any temperature and salinity at atmospheric pressure. Table A-4(a) through (t) applies for given constant salinities and provides the behavior with wavelength and temperature at atmospheric pressure. Table A-5(a), (b) enables the computation of index at pressures above atmospheric for any wavelength and temperature but only at  $35\%_0$  salinity, while Table A-6(a), (b) does the same for S =  $0\%_0$  (pure water).

The first four examples below provide the index for atmospheric pressure and serve to demonstrate the use of the tables, while Examples 5 and 6 apply to higher pressures.

#### Example 1

To find the index of refraction for values explicitly listed, simply look up the appropriate table.

e.g.: For  $\lambda = 546.1$  nm, T = 18°C, S = 34% from Table A-3(e).

$$n = 1.34093$$

#### Example 2

If the value of any parameter is not explicitly listed, interpolate linearly between those values bracketing the parameter.

e.g.: For  $\lambda = 546.1$  nm, T = 18°C, S = 34.48% interpolate linearly between the salinities 34% and 35% from Table A-3(e).

thus, n = 1.34102

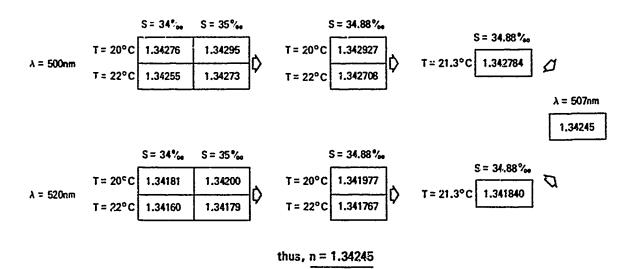
#### Example 3

To find the index for  $\lambda = 546.1$  nm, T = 18.2°C and S = 34.48%, proceed as follows, interpolating both for temperature and salinity, from Table 4-3(e). The order of interpolation is immaterial.

thus, 
$$n = 1.34100$$

#### Example 4

To find the index for  $\lambda=507\,\mathrm{nm}$ , T = 21.3°C, S = 34.88%, none of which is explicitly listed in the tables, proceed as in Example 3 for the wavelengths, 500 nm and 520 nm from Tables A-1(f) and (g), and then interpolate between the two wavelengths.



To obtain the index of refraction at pressures above atmospheric. Table A-5 and/or A-6 are to be used in conjunction with Tables A-1 through A-4.

Since A-5 and A-6 hold for  $S = 35\%_0$  and  $S = 0\%_0$  respectively, it is necessary to first find the index at the particular combination of wavelength, temperature, and pressure for  $S = 35\%_0$  and repeat the same for  $S = 0\%_0$ . Finally interpolate linearly the two resulting values to arrive at the desired index for the specified salinity. The following two examples will demonstrate their use.

#### Example 5

Find the index of refraction of standard seawater (35%), for the wavelength  $\lambda = .457.9 \, \text{nm}$ , at T = 18°C, and p = 250 kg/cm² gage. These values of the three parameters are explicitly listed, so proceed as follows: First, find the index at atmospheric pressure using Table A-2(b); then, add the increment given in Table A-5(a); and finally, add algebraically the increment given in Table A-5(b). Thus,

From Table A-2(b) (atmospheric pressure) n = 1.34553 From Table A-5(a)  $\Delta n = +0.00351$  From Table A-5(b) linearly interpolating  $betw een \ \lambda = 440 \, nm \ and \ \lambda = 460 \, nm$   $\Delta n = +0.00002$  1.34906

therefore, n = 1.34906

#### Example 6

In order to find the index for the same wavelength, temperature, and pressure as in Example 5 but for a salinity of  $30\%_0$ , use must be made of both Table A-5 and A-6.

For the salinity 35% we found n = 1.34906 above.

For the salinity 0%e(pure water) we have:

From Table A-2(b) (atmospheric pressure)

From Table A-6(a)

From Table A-6(b) linearly interpolating

between  $\lambda = 440$  and 460 nm  $\Delta n = +0.00002$ 

n = 1.34242

It is now only necessary to interpolate linearly between the two salinities.

 $\lambda = 457.9 \text{ nm}$   $T = 18^{\circ}\text{C}$   $p = 250 \text{ kg/cm}^2$   $S = 35\%_0$ , n = 1.34905  $S = 30\%_0$ , n = 1.34811

thus n = 1.34811

In any use of the tables of index of refraction, linear interpolation is satisfactory for providing the value of index to the fifth decimal place since the tables have been quite densely interpolated. Tables A-1 through A-4 have an accuracy "within"  $3 \times 10^{-5}$ , while Table A-5 is accurate to  $\pm 6 \times 10^{-5}$  and Table A-6 to  $\pm 10 \times 10^{-5}$ .

We have compiled here some representative values of the index of refraction of seawater for extreme values of the parameters, namely T=0 and  $30^{\circ}$ C, S=0 and  $35\%_n$ ,  $\lambda=400$  and 700 nm, p=0 and 1000 kg/cm<sup>2</sup> gage. The index of refraction is a function  $n(T,S,\lambda,p)$  so we have also presented the partial derivatives to indicate the magnitudes of these quantities.

Table 7-1. The index of refraction and its derivatives, computed for extreme values of the four parameters, i.e. at  $\lambda = 400$  and 700nm, S = 0 and  $35\%_0$ , T = 0 and  $30^{\circ}$  C, P = 0 and 1100 kg/cm<sup>2</sup> gage.

p kg/cm²	T °C	S ‰	λ nm	n	$\frac{\Delta n}{1 \text{ nm}} \times 10^5$	$\frac{\Delta n}{1\%} \times 10^5$	$\frac{\Delta n}{1^{\circ}C} \times 10^{5}$	$\frac{\Delta n}{1 \text{ kg/cm}^2} \times 10^5$
0	0	0	400	1.344186	- 9.02	20.65	- 0.75	1.62
0	0	0	700	1.331084	- 2.18	19.46	- 0.25	1.60
0	0	35	400	1.351415	- 9.27	20.65	- 4.85	1.56
0	0	35	700	1.337906	2.25	19.46	- 3.15	1.52
0	30	0	400	1.342681	-8.94	19.05	- 12.10	1.38
0	30	C	700	1.329128	-2.09	17.66	11.50	1.36
0	30	35	400	1.348752	- 9.30	19.05	<b>–</b> 12.95	1.40
0	30	35	700	1.335316	-2.17	17.66	<b>– 12.55</b>	1.36
1100	0	0	400	1.360076	-9.17	19,46	- 11.25	1.32
1100	0	0	700	1.346604	-2.28	18.14	<b>– 10.75</b>	1.28
1100	0	35	400	1.366885	<b>- 9.42</b>	19.46	- 11.85	1.24
1100	0	35	700	1.352956	-2.40	18.14	- 10.15	1.20
1100	30	G	400	1.356281	-9.09	18.74	- 16.10	1.18
1100	30	0	700	1.342958	-2.19	17.22	- 15.50	1.14
1100	30	35	400	1.362842	- 9.45	18.74	- 14.45	1.16
1100	30	35	700	1.348986	-2.32	17.22	- 14.05	1.12

NOTE: The above derivatives are actually mean slopes over some interval, namely, 10 nm for  $\Delta n/\Delta \lambda$ ,  $2^{\circ}C$  for  $\Delta n/\Delta T$ , 50 kg/cm<sup>2</sup> for  $\Delta n/\Delta \rho$ . In the case of salinity the interval is immaterial since the functional behavior is linear and the slope is constant over the whole range.

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### 8. REFERENCES

Akima H. (1972): "Interpolation and Smooth Curve Fitting Based on Local Procedures." Assoc. Comp. Machin. 15(10), 914-918.

- Bein, W., H. G. Hirsekorn, L. Moller (1935): "Konstantenbestimmungen des Meerwassers und Ergebnisse uber Wasserkorper." Veroffentlichungen des Inst. fur Meereskunde, Univ. Berlin, A-Geographischnaturwissenschaftliche Reihe, Heft 28, 1–239.
- Carritt, D. E., J. H. Carpenter (1959): "The Composition of Seawater and the Salinity-Chlorinity-Density Problems. In: Conference on Physical and Chemical Properties of Seawater. Easton, Maryland, Sept. 4-5, 1958. Nat. Acad. Sci. Nat. Res. Counc., Publication No. 600, 67—86.
- Cox, R. A. (1963): "The Salinity Problem." In: Progress in Oceanography 1, Mary Sears ed., Macmillan, 243-261.
- Cox, R. A. (1965): "The Physical Properties of Seawater." In: Chemical Oceanography, eds. J. P. Riley and G. Skirrow. Academic Press, London, 1965, Vol. 1, Chpt. 3.
- Cux, R. A., F. Culkin, J. P. Riley (1967): "The Electrical Conductivity/Chlorinity Relationship in Natural Seawater." Deep-Sea Res., No. 14, 203–220.
- Cox, R. A., M. J. McCartney, F. Culkin (1970): "The Specific Gravity/Salinity/Temperature Relationship in Natural Seawater. Deep-Sea Res., No. 17, 679-689.
- Dittmar, W. (1884): "Report on Researches into the Composition of Ocean Water, Collected by HMS Chalienger." Challenger Reports, Phys. Chem. 1
- Fisher, F. H., R. B. Williams, O. E. Dial, Jr., (1970): "Analytical Equation of State for Water and Seawater." In: Fifth Report of the Joint Panel on Oceanographic Tables and Standards. UNESCO Technical Papers in Marine Science, No. 14, 10.

- Fleming, R. H. (1939): "Tables for Sigma-t." Journ. Mar. Res. 2, 9-11.
- Forch, C., M. Knudsen, S. P. L. Sorensen (1902): "Berichte Über die Konstantenbestimmungen zur Aufstellung der Hydrographischen Tabbelen." D. Kgl. Danske Videnok, Selsk. Skrifter, 6 Raekke, naturvidensk. og mathem., Afd XII, 1.
- Gifford, J. W. (1906): "The refractive Indices of Water and Seawater." Proc. Roy. Soc., 78 A, 406-409.
- Goldberg, E. D. (1963): "The Cceans as a Chemical System." In: The Sea-Ideas and Observations on Progress in the Study of the Seas, Vol. 2, W. N. Hill ed., Interscience, New York, 3-15.
- Hallwachs, W. (1893): "Uber eine Differentialmethode mit Streifender Inzidenz zur Bestimmung der Unterschiede der Lichtbrechungverhaltnisse von Flussigkeiten." Annalen der Physik, Neme Folge, Band 50, 577.
- Hilgard (1877): U. S. Coast Survey Report, Appendix X, 103.
- Jacobsen, J.P., M. Knudsen (2940): "Urnormal 37 or Primary Standard Seawater, 1937," Assoc. d'Oceanogr. Phys., Union Geod. et Geophys. Internat., Publ. Sci. 7, 1–38.
- Knudsen, M. (1901): Hydrographical Tables, Copenhagen.
- Krummel, O. (1894): "Das Doppelbild-Refraktometer zur Bestimmung des Specifischen Gewichts des Seewassers auf Optischem Wege." Annalen der Hydrogr. und Marit. Meteor. 22, Heft VII, 241-249.
- Krummel, O. (1907): Handbuch der Ozenographie I, Stuttgart.
- Landolt-Bornstein, 1st Drift, 34.
- Mehu, A., A. Johannin-Gilles (1968): "Variation de L'indice de Refraction de L'eau de Mer Etalon de Copenhague et des ses Dilutions en Fonction de la Longeur D'onde, de la Temperature et de la Chlorinite. Cahiers Oceanogr. 20(9), 803-812.
- Miyake, Y. (1939): "Chemical Studies of the Western Pacific Ocean IV, The Refractive Index of Seawater." Bull. Chem. Soc., Japan 14, 239-242.
- Pape, C. (1922): "Uber die Verwendbarkeit des Interferometers zur Bestimmung des Salzgehaltes von Meerwasser." Annalen der Hydrogr. und Marit. Meteor. 50, Heft VII, 193-202.
- Pape, C. (1924): "Uber die Verwendbarkeit des Interferometers zur Bestimmung des Salzgehaltes von Meerwasser, Weitere Ergebnisse," Annalen der Hydrogr. und Marit. Meteor. 52, Hoft XI, 249–254.
- Reeburgh, W. S. (1966): "Some Implications of the 1940 Redefinition of Chlorinity, Deep-Sea Res. 13, 975-976.
- Riley, J. P., R. Chester (1971): "Introduction to Marine Chemistry." Acad. Press, 465.
- Rosen, J. S. (1947): "The Refractive Indices of Alcohol Water and Their Mixtures at High Pressures."

  Journ-Opt. Soc. Am. 37 (11), 932-938.

- Sabinin, K. D., A. E. Gamutilov (1958): "On the Prospects of Using the Laboratory Interometer ITR-2 for the Determination of Salinity of Seawater." Meteorologiia i Gidrologiya 5, 51-54.
- Saint-Guilly, B. (1952): "Mesure par Interferometrie des Differences D'indice de Refraction des Eaux de Mer." Cahiers Oceanogr. 5, 273-278.
- Saint-Guilly, B. (1954): "Sur la Determination de L'indice de Refraction et de la Densite de L'eau de Mer par Interferometrie." Bull. Inst. Oceanogr. No. 1041, 1-16.
- Saint-Guilly, B. (1955): "Sur L'indice de Refraction des Liquides Purs et des Solutions, en Particulier de L'eau de Mer, comme Fonction de la Temperature et de la Concentration." Bull. Inst. Oceanogr. No. 1052, 1–24.
- Soret, J. L., E. Sarasin (1889): "Sur L'indice de Refraction de L'eau de Mer." Comptes Rendus 108, 1248-1249.
- Stanley, E. M. (1970): "The Refractive Index of Pure Water and Seawater as a Function of High Pressure and Moderate Temperature, Part II Pure Water for a Wavelength of 6328 Angstroms.", Research & Development Report, Naval Ship Research & Development Laboratory, Report No. 3066.
- Stanley, E. M. (1971): "The Refractive Index of Seawater as a Function of Temperature, Pressure and Two Wavelengths." Deep-Sea Res. 18, 833-840.
- Thompson, T. G., H. E. Wirth (1931): "The Specific Gravity of Seawater at Zero Degree in Relation to the Chlorinity." Conseil Perm. Intern. pur L'Explor. de la Mer., Journ. de Cons. 6, 232–240.
- Thoulet, J. (1921): "Circulation Oceanique; Densites in situ et Indices des Refraction." Bull. Inst. Oceanogr. No. 394, 1–26.
- Tilton, L. W., J. K. Taylor (1938): "Refractive Index and Dispersion of Distilled Water for Visible Radiation at Temperatures 0° to 60°C."
- Tornoe, H. (1895): "Om Bestemmelse af Sovandets Salfgehalt ved Hjaelp af dets Elektriske Ledningsevne."

  Nyt Magazin for Naturvidenskaberne, Vol. 34, 232–240.
- Tornoe, H. (1900): "On the Determination of the Salinity of Seawater by its Powers of Refraction." Report on Norweg. Fish. and Mar. Invest. 1, No. 6, 1–13.
- UNESCO (1966a): 'International Oceanographic Tables, first issue, Nat. Inst. Oceanogr. UNESCO, 1—128.
- UNESCO (1966b): Second Report of the Joint Panel on Oceanographic Tables and Standards. UNESCO technical papers in Marine Science No. 4, 16 pp.
- Utterback, C. L., T. G. Thompson, B. D. Thomas (1934). "Refractivity-Chlorinity-Temperature Relationships of Ocean Waters." Intern. Counc. Expl. Sea 9, 35–38.
- Vaurabourg, C. (1921b): "La Determination de la Densite de L'eau de Mer par la Mesure de L'indice de Refraction." Bull. Inst. Oceanogr. No. 395, 27-48.

- Vel'Mozhnaya, Yu. A. (1960): "On the prospects of Using the Interferometer for the Determination of Salinity of Seawater." Trudy Morskogo Gidrofizicheskogo Instituta. (Transactions of the Marine Hydrophysical Institute) 22, 26-32. Translation M.O. 16782, P.O. 45201, U.S. Naval Hydrographic Office, 1962.
- Waxler, R. M., C. E. Weir, H. W. Schamp, Jr., (1964): "Effect of Pressure and Temperature Upon the Optical Dispersion of Benzene, Carbon Tetrachloride and Water." Journ. Res. U.S. Nat. Bur. Stand., 68A, No. 5, 489-498.

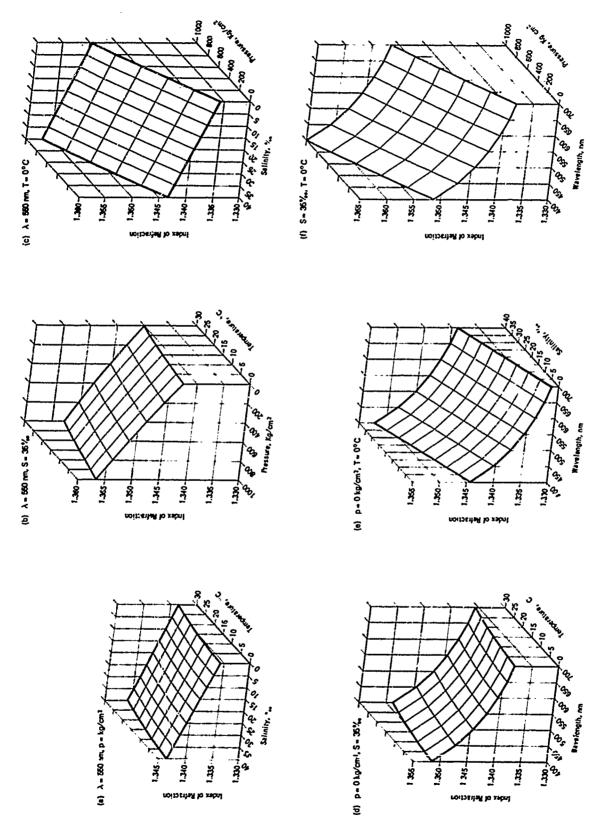
# APPENDIX A. TABLES OF THE INDEX OF REFRACTION OF SEAWATER

Tables of smoothed, interpolated indices of refraction of seawater are presented in Appendix A. The ranges of the variables, salinity, temperature and pressure cover those of interest in oceanography. Wavelengths are limited to the visible spectral region, i.e., 400 to 700 nanometers. For most applications the desired index can be obtained either directly from Tables A-1 through A-4 or by linear interpolation between adjacent values in one of these tables. Should the index be required at other than atmospheric pressure, the user must resort to Tables A-5 and A-6 to obtain an index correction or increment which must then be applied to the index value for atmospheric pressure obtained from Tables A-1 through A-4. For many problems involving high pressures the salinity will be close to 35%, and in these cases the required index increment can be obtained using Tables A-5(a,b) only. Section 7 details the procedures to be used in utilizing the tables.

Immediately preceding each group of tables some summary information is presented on their use, format and data base. Details regarding the selection of the primary input data and the procedures used in generating the tables are presented in Section 4. Because of the multidimensional nature of the tables and the difficulty of visualizing the manner in which the index varies with the four independent variables, a set of six three-dimensional plots is presented in Fig. A-1, each showing index as a function of two variables with the other two held constant. Figures A-1a, b, and c are for a fixed wavelength (550 nanometers) and show typical index surfaces for combinations of two of the three oceanographic variables, temperature, salinity, and pressure. Figures A-1d, e, and f all have wavelength displayed along the horizontal abscissa and show the dispersion surface for the oceanographic variables. Conventional two-dimensional plots are presented as Figs. 4-2, 4-3, and 4-4 in the text.

The Tables A-1 through A-6 that follow are separated into three groups. Tables A-1, A-2, and A-3 present the dependence of index on temperature and salinity at atmospheric pressure for various particular wavelengths. Table A-4 presents the index dependence on temperature and wavelength at atmospheric pressure for particular salinities. Finally, Tables A-5 and A-6, which are directly additive to Tables A-1 through A-4, permit extension of the latter to higher pressures for any temperature, wavelength, and salinity.

The values of index of refraction are with respect to air.



Three-dimensional plots of the index of refraction of segments as function of salinity, temperature, pressure, and wavelength. In each plot two of the variables have been held fixed as indicated. Each plot starts at the same index value, viz.1.330, and has the same vertical scale to aid in the visurilization of the relative effect changes in each of the parameters have on index. Fig. A-1.

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14.

## TABLES A-1, A-2, A-3 Atmospheric Pressure

These tables have been based on the data of Mehu and Johannin-Gilles (1968). Three of their original chlorinities have been discarded. The abridged table, on which our tables have been based, is given as Table 4-2 in Subsection 4.2 and includes:

Wavelength: 404.7(Hg), 435.8(Hg), 467.8(Cd), 480.0(Cd), 408.5(Cd), 546.1(Hg),

577.0(Kr), 579.1(Hg), 589.3(Na), 643.8(Cd) nm

Chlorinity: 0.0, 19.373%

Salinity: 0.0, 34.998% (computed)

Temperature: 1°, 5°, 10°, 15°, 20°, 25°, 30°C

These tables give the temperature and salinity dependence of the index of refraction of seawater (with respect to air) at atmospheric pressure for particular wavelengths. They are accurate to "within"  $3 \times 10^{-5}$  in the interpolated wavelength range of 404.7 to 643.8 nm and slightly less accurate outside this range.

- Table A-1: For an equispaced wavelength increment of 20 nm and covers the range 400 to 700 nm. For closer spacing, see Table A-4.
- Table A-2: For selected laser lines; namely, 441.6(HeCd), 457.9(A), 476.5(A), 488.0(A), 496.5(A), 514.5(A), 532.0(NdYag), 568.2(Kr), 632.8(He), 647.1(Kr).
- Table A-3. For M-G's original wavelengths given above, except for  $\lambda = 480.0$  nm included in Table A-1.

The temperatures are given every 2°C between 0 and 30°C and the salinities every 5%, between 0 and 30%, and every 1%, between 30 and 43%.

Table A-1. INDEX OF REFRACTION OF SEAWATER
Equispaced Wavelengths, every 20 nm — Atmospheric Pressure

					(a)					λ = 400	) nm
TEMP				SAL	INITY (0/	<u>س</u>				70 - 400	
°c	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0	
0.0	1.34418	1.34521	1.34625	1.34728	1.34831	1.34935	1.35038	1.35059	1.35079	1.35100	
2.0	1.34417	1.34519	1.34621	1.34723	1.34825	1.34928	1.35030	1.35950	1.35071	1.35091	
4.0 6.0	1.34413	1.34514	1.34608	1.34717	1.34818	1.34919	1.35020	1.35040	1.35061	1.35081	
8.0	1.34400	1.34500	1.34599	1.34699	1.34799	1.34896	1.34998	1.35018	1.35038	1.3505H	
10.0	1.34391	1.34489	1.34589	1.34688	1.34787	1.34886	1.34985	1.35005	1.35025	1.35044	
12.0	1.34379	1.34478	1.34576	1.34675	1.3/773	1.34872	1.34970	1.34990	1.35010	1.35030	
14.0	1.34366	1.34464	1.34562	1.34660	1.34758	1.34856	1.34954	1.34974	1.34993	1.35013	
16.0 18.0	1.34351	1.34448	1.34546 1.34529	1.34643	1.34741	1.34839	1.34936	1.34956	1.34975	1.34993	
20.0	1.34316	1.34413	1.34510	1.34607	1.34703	1.34800	1.34897	1.34916	1.34956	1.34976 1.34955	
22.0	1.34227	1.34394	1.34490	1.34586	1.34683	1.34779	1.34876	1.34895	1.34914	1.34933	
24.0	1.34277	1.34373	1.34469	1.34565	1.34661	1.3475#	1.34853	1.34873	1 34892	1.34911	
26.0	1.34256	1.34351	1.34447	1.34543	1.54639	1.34734	1.36840	1.34849	1.34868	1.34887	
28.0	1.34233	1.34328	1.34424	1.34519	1.34614	1.34710	1.34805	1.34825	1.34844	1.34863	
30.0	1.34209	1.34304	1.34399	1.34494	1.34589	1.34685	1.34780	1.34799	1.34818	1.34437	
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	
0.0	1.35121	1.35141	1.35162	1.351%	1.35263	1.35224	1.35245	1.35265	1.35286	1.35307	
2-0	1.35111	1.35132	1.35152	1.35173	1.35143	1.35213	1.35234	1.35254	1.35275	1.35295	
4.0 6.0	1.35101 1.35090	1.35121	1.35141	1.35162	1.35152	1.35202 1.35190	1.35222	1.35243	1.35763	1.35283 1.35270	
8.0	1.35078	1.35098	1.35117	1.35137	1.35157	1.35177	1.35197	1.35230	1.35237	1.35257	
10.0	1.35064	1.35084	1.35104	1.3>124	1.35143	1.35163	1.35183	1.35204	1.35223	1.35243	
12.0	1.35049	1.35069	1.35089	1.35108	1.35128	1.35143	1.35168	1.35167	1 35207	1.35227	
14.0	1.35032	1-35052	1.35072	1.35091	1.35111	1.35131	1.35150	1.35170	1.35189	1.35209	
16.0	1.35014	1.35034	1.35053	1.3>073	1-3>092	1.35112	1.3>131	1.35171	1.35170	1.35140	
18.0 20.0	1.34995	1.35014	1.35034	1.35053	1.35073	1.35092	1.35111	1.37131	1.35150	1.35170	
22.0	1.34953	1.34972	1.34991	1.35011	1.35030	1.35049	1.35041	1.35110	1.35129	1.35149	
24.0	1.34930	1.34950	1.34469	1.34968	1.35007	1.35020	1.35046	1.35065	1.35084	1.35103	
26.0	1.34907	1.34926	1.3494>	1.34964	1.34983	1.35002	1.356.22	1. 15041	1.35060	1.35079	
28.0	1.34882	1.34901	1.34920	1.34939	1.34956	1.34977	1.34997	1.37010	1.4-035	1.45054	
30.0	1.34856	1.34875	1.34494	1.14913	1.34932	1.34951	1.54970	1.34989	1.15008	1.35027	
TPMD				CAT	(b)					λ = 420	nm
TEMP	1 00				INITY (0.		30.0				nm
TEMP OC	0.0	5.0	10.0			ω) <del>25.0</del>	30.0	31.0	32.0	λ = 420	nm
°C				15.0	INITY (0.0 70.0	25.0				33.0	nm
0.0	1.34243	1.34345	1.34448	15.0 1.34550	INITY (0., 70.0	25.0 1.34756	1.34858	1.34879	1.34899	33.0 1.34920	nm
°C 0.0 2.0 4.0	1.34243 1.34241 1.34238	1.34345 1.34343 1.34338	1.34448 1.34444 1.34439	15.0 1.34550 1.34546 1.34540	INITY (0.0 20.0 1.34653 1.34447 1.34040	25.0 1.34756 1.34749 1.34741	1.34858 1.34850 1.34841	1.34879 1.34871 1.34861	1.34899 1.34891 1.34881	33.0	nm
°C 0.0 2.0 4.0 6.0	1.34243 1.34241 1.34238 1.34232	1.34345 1.34343 1.34338 1.34332	1.34448 1.34444 1.34439 1.34432	15.0 1.34550 1.34546 1.34540 1.34531	70.0 1.34653 1.34447 1.34640 1.34631	25.0 1.34756 1.34749 1.34741 1.34731	1.34858 1.34850 1.34841 1.34830	1.34879 1.34871 1.34861 1.34850	1.34899 1.34891 1.34881 1.34870	33.0 1.34920 1.34911 1.34901 1.34890	nm
0.0 2.0 4.0 6.0 8.0	1.34243 1.34241 1.34238 1.34232 1.34225	1.34345 1.34343 1.34338 1.34332 1.34324	1.34448 1.34444 1.34439 1.34432 1.34423	15.0 1.34550 1.34546 1.34540 1.34531 1.34521	70.0 1.34653 1.34447 1.34640 1.34631 1.34620	25.0 1.34756 1.34749 1.34741 1.34731 1.34719	1.34858 1.34850 1.34841 1.34830 1.34838	1.34879 1.34871 1.34861 1.34850 1.34838	1.34899 1.34891 1.34881 1.34870 1.34858	33.0 1.34920 1.34911 1.34901 1.34890 1.34870	nm
0.0 2.0 4.0 6.0 8.0 10.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.36215	1.34345 1.34343 1.34338 1.34332 1.34324 1.34313	1.34448 1.34444 1.34439 1.34432 1.34423	15.0 1.34550 1.34546 1.34540 1.34531 1.34521 1.34510	70.0 1.34653 1.34447 1.34640 1.34631 1.34620 1.34608	25.0 1.34756 1.34749 1.34741 1.34731 2.34719 1.34707	1.34858 1.34850 1.34841 1.34830 1.34838	1.34879 1.34871 1.34861 1.34850 1.34838 1.34825	1.34899 1.34891 1.34881 1.34870 1.34858 1.34844	33.0 1.34920 1.34911 1.34901 1.34890 1.34870	nm
0.0 2.0 4.0 6.0 8.0 10.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.34215 1.34204	1.34345 1.34343 1.34338 1.34332 1.34324 1.34313 1.34301	1.34448 1.34444 1.34439 1.34432 1.34423 1.34412	15.0 1.34550 1.34546 1.34540 1.34531 1.34521 1.34510 1.34497	70.0 1.34653 1.34447 1.34640 1.34631 1.34620 1.34608 1.34695	25.0 1.34756 1.34749 1.34741 1.34731 2.34719 1.34707 1.34692	1.34858 1.34850 1.34841 1.34830 1.34818 1.34835	1.34879 1.34871 1.34861 1.34850 1.34838 1.34825	1.34899 1.34891 1.34881 1.34870 1.34858 1.34844	33.0 1.34920 1.34911 1.34901 1.34890 1.34879 1.34864 1.34864	nm
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.36215	1.34345 1.34343 1.34338 1.34332 1.34324 1.34313	1.34448 1.34444 1.34439 1.34432 1.34423	15.0 1.34550 1.34546 1.34540 1.34531 1.34521 1.34510	70.0 1.34653 1.34447 1.34640 1.34631 1.34620 1.34608	25.0 1.34756 1.34749 1.34741 1.34731 2.34719 1.34707	1.34858 1.34850 1.34841 1.34830 1.34838	1.34879 1.34871 1.34861 1.34850 1.34838 1.34825	1.34899 1.34891 1.34881 1.34870 1.34858 1.34844	33.0 1.34920 1.34911 1.34901 1.34890 1.34870	nm
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.36215 1.34204 1.34191 1.34176	1.34345 1.34343 1.34338 1.34332 1.34324 1.34313 1.34301 1.34276 1.34276	1.34448 1.34449 1.34432 1.34423 1.34412 1.34385 1.34385 1.34369	15.0 1.34550 1.34540 1.34540 1.34531 1.34510 1.34497 1.34482 1.34466 1.34449	1.34653 1.34653 1.3467 1.34640 1.34630 1.34620 1.34608 1.34595 1.34595 1.34543	25.0 1.34756 1.34749 1.34741 1.34719 1.34707 1.34609 1.34659 1.34661	1.34858 1.34850 1.34831 1.34830 1.34818 1.34790 1.34774 1.34776 1.34738	1.34879 1.34871 1.34861 1.34850 1.34838 1.34825 1.24809 1.34775 1.4775	1.34899 1.34891 1.34881 1.34870 1.34859 1.34844 1.34829 1.34713 1.34776	33.0 1.34920 1.34911 1.34901 1.34890 1.3487, 1.34844 1.34848 1.34848 1.34849 1.34814	nm
0.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 18.0 20.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.34215 1.34204 1.34191 1.34176 1.24160	1.34345 1.34343 1.34338 1.34324 1.34313 1.34301 1.34786 1.34277 1.34756 1.34238	1.34448 1.34449 1.34432 1.34423 1.34412 1.34399 1.34385 1.34369 1.34352	15.0 1.34550 1.34546 1.34531 1.34521 1.34510 1.34497 1.34482 1.34464 1.34449	1.34653 1.34647 1.34640 1.34631 1.34602 1.34608 1.34608 1.34595 1.34579 1.34543 1.34543	25.0 1.34756 1.34749 1.34741 1.34713 1.34719 1.34670 1.34670 1.34659 1.36641 1.36641	1.34858 1.34850 1.34841 1.34838 1.34834 1.34776 1.34776 1.34776 1.34778	1.34879 1.34871 1.34861 1.34850 1.34838 1.34825 1.24809 1.34775 1.34775	1.34899 1.34891 1.34881 1.34858 1.34844 1.34829 1.34813 1.34795 1.34776	33.0 1.34920 1.34911 1.34901 1.34901 1.34877 1.34844 1.34847 1.34814 1.34795 1.34775	nm
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.36215 1.34204 1.34191 1.34176 1.24160 1.34142	1.34345 1.34343 1.34338 1.34324 1.34313 1.34301 1.34276 1.34276 1.34276 1.34258 1.34258	1.34448 1.34444 1.34439 1.34432 1.34412 1.34412 1.34399 1.34385 1.34369 1.34362 1.34363 1.34364	15.0 1.34550 1.34546 1.34540 1.34531 1.34510 1.34497 1.34482 1.34466 1.34449 1.34440 1.34440	INITY (0,, 70.0 1.34653 1.34447 1.34640 1.34620 1.34620 1.34595 1.34579 1.34543 1.34543 1.34545	25.0 1.34756 1.34749 1.34741 1.34719 1.34707 1.34609 1.34609 1.34622 1.34622 1.34622 1.34622	1.34858 1.34850 1.34841 1.34830 1.34838 1.34834 1.34774 1.34774 1.34734 1.34734 1.34734	1.34879 1.34861 1.34850 1.34850 1.34825 1.24809 1.34793 1.44775 1.34775	1.34899 1.34891 1.34881 1.34870 1.34844 1.34844 1.34849 1.34713 1.34776 1.34776	33.0 1.34920 1.34911 1.34901 1.34870 1.34870 1.34874 1.34848 1.34848 1.34848 1.34879 1.34795 1.34775 1.34775	nm
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0	1.34243 1.34241 1.34238 1.34235 1.34225 1.34215 1.34191 1.34191 1.34160 1.34142 1.34142	1.34345 1.34338 1.34332 1.34323 1.34321 1.34301 1.34786 1.34277 1.34256 1.34238 1.34219	1.34448 1.34449 1.34432 1.34432 1.34421 1.34399 1.34385 1.34369 1.34352 1.34344 1.34344	15.0 1.34550 1.34540 1.34531 1.34531 1.34510 1.34497 1.34486 1.34440 1.34430 1.34430 1.34388	INITY (0,, 70.0  1.34653 1.34647 1.34640 1.34630 1.34695 1.34595 1.34540 1.34563 1.34565 1.34565	25.0 1.34756 1.34749 1.34731 1.34719 1.34707 1.34679 1.34659 1.34659 1.34601 1.34602 1.34601 1.34601	1.34858 1.34850 1.34841 1.34838 1.34838 1.34774 1.34774 1.34778 1.34716 1.34716 1.34716	1.34879 1.34801 1.34800 1.34830 1.34834 1.34825 1.24809 1.34775 1.34737 1.34737 1.34737	1.34899 1.34881 1.34870 1.34858 1.34844 1.34813 1.34717 1.34776 1.34773 1.34773	33.0 1.34920 1.34911 1.34901 1.34901 1.34974 1.34844 1.34847 1.34847 1.34817 1.3475 1.3475 1.3475 1.34754	nm
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0	1.34243 1.34241 1.34238 1.34232 1.34225 1.36215 1.34204 1.34191 1.34176 1.24160 1.34142	1.34345 1.34343 1.34338 1.34324 1.34313 1.34301 1.34276 1.34276 1.34276 1.34258 1.34258	1.34448 1.34444 1.34439 1.34432 1.34432 1.34439 1.34385 1.34385 1.34365 1.34364 1.34314 1.34293	15.0 1.34550 1.34546 1.34531 1.34521 1.34510 1.34497 1.34482 1.34466 1.34410 1.34410 1.34388 1.34388	INITY (0, 70.0 1.34653 1.3447 1.34640 1.34631 1.34620 1.34595 1.34579 1.34545 1.34545 1.34526 1.34565	25.0  1.34756 1.34749 1.34741 1.34773 1.34707 1.34692 1.34601 1.34602 1.34601 1.34659	1.34858 1.34850 1.34831 1.34838 1.34838 1.34774 1.34774 1.34778 1.34718 1.34697 1.34697 1.34697	1.34879 1.34861 1.34850 1.34834 1.34834 1.34873 1.34773 1.34775 1.34777 1.34776 1.34769	1.34899 1.34891 1.34870 1.34858 1.34858 1.34844 1.34813 1.34776 1.34776 1.34776 1.34735 1.34735 1.34735	33.0 1.34920 1.34911 1.34901 1.34901 1.34877 1.34844 1.34847 1.34814 1.34795 1.34754 1.34754 1.34754 1.34764	nm
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0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 18.0 20.0 24.0 26.0 26.0	1.34243 1.34241 1.34238 1.34225 1.34225 1.34225 1.34291 1.34176 1.24160 1.34123 1.34102 1.34081 1.34088 1.34034	1.34345 1.34338 1.34338 1.34332 1.34313 1.34301 1.34786 1.34726 1.34726 1.34726 1.34726 1.34726 1.34726 1.34726 1.34726 1.34726 1.34726	1.34448 1.34449 1.34439 1.34423 1.34412 1.34399 1.34355 1.34369 1.34354 1.34314 1.34293 1.34271 1.34227	15.0 1.34550 1.34546 1.34531 1.34521 1.34510 1.34497 1.34469 1.34469 1.34469 1.3430 1.34310 1.3430 1.3432 1.3432 1.34317	INITY (0,, 70.0  1.34653 1.34-47 1.34640 1.34620 1.34698 1.34579 1.34545 1.34545 1.34565 1.34565 1.34544 1.34440	25.0  1.34756 1.34749 1.34731 1.34707 1.34672 1.34670 1.34670 1.34670 1.34670 1.34670 1.34670 1.34670 1.34670 1.34570 1.34570	1.34858 1.34850 1.34830 1.34838 1.34830 1.34790 1.34774 1.34738 1.34716 1.34697 1.34697 1.34600 40.0	1.34879 1.34801 1.34801 1.34804 1.34825 1.24809 1.34775 1.34775 1.34776 1.34604 1.34604	1.34899 1.34881 1.34870 1.34858 1.34844 1.34876 1.34776 1.34775 1.34776 1.34735 1.34735 1.34737	33.0 1.34920 1.34911 1.34901 1.34870 1.34870 1.34871 1.34848 1.34848 1.34848 1.34870 1.34775 1.34776 1.3477	nm
0.0 2.0 4.0 6.0 8.0 10.0 14.0 14.0 20.0 22.0 24.0 25.0 30.0	1.34243 1.34241 1.34238 1.34225 1.34225 1.34216 1.34191 1.34176 1.34162 1.34162 1.34163 1.34081 1.34084 1.34034	1.34345 1.34343 1.34338 1.34332 1.34313 1.34301 1.34274 1.34275 1.34275 1.34275 1.34275 1.34275 1.34127 1.34127	1.34448 1.34444 1.34432 1.34423 1.34423 1.34412 1.34399 1.34385 1.34364 1.34314 1.34293 1.34271 1.34247 1.34222 36.0 1.34961 1.34972	15.0 1.34550 1.34546 1.34531 1.34521 1.34510 1.34497 1.34406 1.34430 1.34430 1.34388 1.24366 1.3432 1.34317 37.0	INITY (0, 70.0  1.34653 1.3447 1.34640 1.34630 1.34608 1.34595 1.34579 1.34545 1.34545 1.34546 1.34546 1.34505 1.3451 1.3451	25.0  1.34756 1.34749 1.34741 1.34731 1.34707 1.34692 1.34659 1.34601 1.34621 1.34601 1.34505 1.34505	1.34858 1.34850 1.34841 1.34830 1.34838 1.34834 1.34776 1.34778 1.34778 1.34674 1.34600 40.0	1.34879 1.34801 1.34801 1.34838 1.34825 1.24909 1.34775 1.34775 1.34776 1.34764 1.34604 1.34604 1.34609	1.34899 1.34891 1.34881 1.34870 1.34858 1.34844 1.34829 1.34776 1.34776 1.34776 1.34736 1.34637 42.0	33.0  1.34920 1.34911 1.34901 1.34901 1.34870 1.34874 1.34874 1.34874 1.34874 1.34874 1.34874 1.34707 1.34674 1.34707 1.34674 1.34707	nm
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0C 0.00 2.00 8.00 10.00 14.00 12.00 12.00 22.00 24.00 25.00 24.00 25.00 6.00 6.00 12.00 14.00 12.00 14.00 12.00 14.00 14.00 14.00 16	1.34243 1.34241 1.34238 1.34225 1.34225 1.34216 1.34191 1.34172 1.34160 1.34162 1.34102 1.34034 34.0 1.34931	1.34345 1.34343 1.34338 1.34332 1.34331 1.34301 1.34274 1.34275 1.34275 1.34275 1.34127 1.34127 1.34127 1.34127 1.34941	1.34448 1.34444 1.34432 1.34423 1.34423 1.34399 1.34385 1.34364 1.34364 1.34271 1.34271 1.34272 36.0 1.34972 1.34972 1.34972 1.34972 1.34972 1.34973 1.34973 1.34973 1.34973 1.34973 1.34973 1.34973 1.34973 1.34973 1.34973	15.0  1.34550 1.34546 1.34531 1.34521 1.34510 1.34497 1.34482 1.34430 1.34430 1.344317  37.0  1.35002 1.3492 1.3492 1.34970 1.34981 1.34971 1.34981 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987 1.34987	INITY (0, 70.0  1.34653 1.34447 1.34640 1.34620 1.34608 1.34595 1.34579 1.34545 1.34520 1.34505 1.34520 1.34505 1.34510 1.34505 1.34501	25.0  1.34756 1.34749 1.34741 1.34731 1.34707 1.34692 1.34607 1.34602 1.34601 1.34555 1.34555 1.34555 1.34555 1.34555 1.34561 1.34943 1.3503, 1.35922 1.34987 1.34989 1.34989 1.34989 1.349891 1.34889	1.34858 1.34850 1.34841 1.34830 1.34790 1.34774 1.34730 1.34697 1.34697 1.34600 40.0 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003 1.35003	1.34879 1.34871 1.34861 1.34850 1.34838 1.34829 1.34793 1.34757 1.34775 1.34716 1.346645 1.346619  **I.U 1.35084 1.35072 1.35074 1.35072 1.34989 1.35999 1.35999 1.359991	1.34899 1.34891 1.34891 1.34844 1.34892 1.348776 1.34776 1.34776 1.34776 1.34737 1.34688 1.34637 42.0 1.35104 1.35094 1.3007 1.35056 1.3007 1.35056 1.3007 1.35056 1.3007 1.36088 1.34988 1.34988 1.34989 1.34948	33.0  1.34920 1.34911 1.34901 1.34870 1.34870 1.34848 1.34848 1.34848 1.34873 1.34775 1.34777 1.34707 1.35074	nm

Table A-1: (cont)

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2014 S			*		(e)				,	A = 440 m
7700	, <u>,</u>		٠,	المو خضي	DETY (o)	خست دم				288332F
°C	O. O	5.0	~(10.0	15.0	20.0	25.0	.30.õ	-31.0	-32.0	33.0
0:0	1.34092	1:34194	1:34295	1:34397	1.34499	1634601	1.34702	1:34723	1534743	1.34763
5.0			1:34292	1,34393	1.34493	1.34594	1.34695		1.34735	1.34756
6.0	11:34087	1:34187	1%34287	1634387	1.34486	1.34586	1.34686	1.34706	1:34726	1634746 1.34735
8.0		~1.°34172		1.34369	1.34467	1.34565	1734664			-1.34722
10.0	1.34045.	1.34162	1.34260	1:34357	1.34455	1.34552	1.34650	1:34669	1:34689	1.34708
12,0		1534150		1.34344	1.34440	1.34537	1.34634	1734654 1734637	1:54473	1.34692
14.0	1.34039 1.34025	1:34121	1.34232 1.34216	1.34328	1.34406	1.34521 1.345 <b>0</b> 4	1.34618	1:34619	1.34638	1634675 1634657
15.0	1634009	1:34104	1. 34200	1:34295	1434391	1.34486	1.34581	1.34600	1:34620	1:34639
20.0	1.33991	1.34046	1.34182	1.34277	1.34372	1:34467	-1.34562	1:34581	1.34600	1.34419
22°0 24°0	1.33973	1.34067	1634162 1634141	1:34257	1.34351	1:34446	1.34541	1.34537	1534579	1.34598 1.34575
2430 · 2630	1.33952	1.34025	1:34119	1.34235	1:34307	1.34401	1.34495	1.34514	1:34533	1.34552
28.0		1:340GZ	1.34095	1.34149	1.34283	1.34377	1.34471	1.34489	1.34568	1.34527
30 <b>.</b> 0	1.33084	1033977	1.34071	1,34164	[.34258	1:34351	1;34445	1.34464	1.34482	1.34501
	34.0	35.0	36.0	37.0	38.0	39.0	, 40.0	- 41.0	42.0	43.0
0.0 2.0	1.34784	1.34804	1.34425	1.34845	7434865 1434856	1.34805	1.34904	1.34926	1,34947	1.34967
.4.n	1.34766	1:34780	1:34006	1:34820	1.34846	1434566	1.34486	1.34906	1.34926	1.34946
6.D	1.34755	1.34774	1.34794	1.34414	1734834	1:34854	1.34874	1:34893	1.34913	1.34933
8.0	1:34742	1.34762	1.34761	1:34801	1:34821	1.34840	1:34#40	1.34879	1.34899	1.34919
10.0 12.0	1.3472 <i>k</i> 1.34712	1.34747	1.34751	1.34770	1.34896	1.34909	1.34428	1.34848	1.34867	1.34903 1.34886
14.0	1.34695	1.34714	1.34733	1.34753	1.34772	1.34791	1.34811	1.34430	1.34849	1.34468
1440	1.34077	1-34695	1.34715	1.34734	1.34753	1.34773	1.34792	1.34811	1.34830	1.34849
1840 2040	1.3465% 1.34638	1.54077	1.34696	1.34715	1.34734	1.34753	1.34777	1.34792	1.34511	1.34H30 1.34809
22.0	1.34610	1.34635	1.34655	1.34674	1.34092	1.34711	1.34730	1.34749	1.4768	1.34787
24.C	1.34294	1. 54013	1.34632	1.34651	1.34670	1.34688	1.34707	1.34726	1.34745	1.34764
26.0		~1-34559	1.3460d 1.34583	1.34627	1.34646	1.34664	1.34683	1.34702	1.34721	1.34740 1.34715
28.0 30.0	1,34546	1.34564	1.3455/	1.34.02	1.34621	1.34613	1.34632	1.34651	1.34670	1.34488
					(4)					λ = <b>400</b> nm
TEMP						<del>/)</del>				<del></del>
_				<u>S</u> AI	Libery (O.					
°c	0.0	>.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0•0	0.0	5.0 1.34061	10.0		•		1.34566	1.34506	1.34007	1.34427
0.0 2.0	1.33940	1.34061	1.34162	15.0 1.34263 1.34259	20.0 1.34364 1.34359	25.0 1.34465 1.34459	1.34566	1.34586	1.34607	1.34627 1.34619
0.0 2.0 4.0	1.33960 1.33955 1.33956	1.34061 .1.34059 1.34655	1.34162 1.34159 1.34154	15.0 1.34263 1.34259 1.34253	20.0 1.34364 1.34359 1.34352	25.0 1.3446> 1.34459 1.34451	1.34566 1.34559 1.34551	1.34506 1.34579 1.34571	1.34607 1.34599 1.34590	1.34627 1.34619 1.34610
0.0 2.0	1.33940	1.34061	1.34162	15.0 1.34263 1.34259	20.0 1.34364 1.34359	25.0 1.34465 1.34459	1.34566 1.34559 1.34551 1.34540 1.34528	1.34586	1.34599 1.34599 1.34590 1.34580 1.34567	1.34627 1.34619 1.34610 1.34599 1.34587
0.0 2.0 4.0 6.0 8.0 81.0	1.34940 1.34959 1.33956 1.33950 1.33943 1.33933	1.34061 .1.34059 1.34055 1.3404F 1.34040	1.34162 1.34159 1.34154 1.34147 1.34138 1.34127	15.0 1.34263 1.34259 1.34253 1.34745 1.34235 1.34234	20.0 1.34364 1.34359 1.34352 1.34343 1.34333	25.0 1.3445 1.34459 1.34451 1.34442 1.34431 1.34418	1.34566 1.34559 1.34551 1.34540 1.34528 1.34515	1.34586 1.34579 1.34571 1.34560 1.34548 1.34534	1.34599 1.34599 1.34590 1.34580 1.34547 1.34553	1.34627 1.34619 1.34610 1.34599 1.34587 1.34573
0.0 2.0 4.0 6.0 8.0 111.0 12.0	1.34940 1.34959 1.33956 1.33943 1.33943 1.33933	1.34061 .1.34059 1.34055 1.34044 1.34040 1.34030	1.34142 1.34159 1.34154 1.34147 1.34138 1.34127	15.0 1.34263 1.34259 1.34253 1.34745 1.34235 1.34236 1.34210	20.0 1.34364 1.34359 1.34352 1.34343 1.34333 1.34321 1.34306	25.0 1.3445 1.34459 1.34451 1.34442 1.34431 1.34418	1.34566 1.34559 1.34551 1.34540 1.34528 1.34515	1.34586 1.34579 1.34571 1.34540 1.34548 1.34534	1.34-07 1.34599 1.34590 1.34580 1.34547 1.34553	1.34627 1.34619 1.34610 1.34599 1.34587 1.34573 1.34576
0.0 2.0 4.0 6.0 8.0 11.0 12.0 14.0	1.34940 1.3495 1.33956 1.33954 1.33933 1.33971	1.34061 .1.34059 1.34055 1.3404F 1.34040	1.34162 1.34159 1.34154 1.34147 1.34138 1.34127	15.0 1.34263 1.34259 1.34253 1.34275 1.34210 1.34210 1.34210	20.0 1.34364 1.34359 1.34352 1.34343 1.34333	25.0 1.3445 1.34459 1.34451 1.34442 1.34431 1.34418	1.34566 1.34559 1.34551 1.34540 1.34528 1.34515	1.34586 1.34579 1.34571 1.34560 1.34548 1.34534	1.34599 1.34599 1.34590 1.34580 1.34547 1.34553	1.34627 1.34619 1.34610 1.34599 1.34587 1.34573
0.0 2.0 4.0 6.0 f.0 ti.n 12.n 14.n 14.0 14.0 14.0	1.349A0 1.34959 1.33956 1.33950 1.33953 1.33973 1.33978 1.33893 1.33877	1.34061 .1.34055 1.34047 1.34047 1.34047 1.34018 1.34018 1.34018 1.34018	1.34162 1.34159 1.34157 1.34147 1.34127 1.34127 1.34114 1.34149 1.34046	15.0 1.34263 1.34253 1.34253 1.34245 1.34210 1.34210 1.34176 1.34176	20.0 1.34364 1.34359 1.34343 1.34321 1.34306 1.34290 1.34273 1.34273	25.0 1.34459 1.34459 1.34451 1.34402 1.34402 1.34402 1.34306 1.34306	1.34566 1.34559 1.34551 1.34528 1.34515 1.34469 1.34464 1.34464	1.34586 1.34579 1.34571 1.34540 1.34548 1.34534 1.34518 1.34543	1.34599 1.34599 1.34590 1.34580 1.34587 1.34553 1.34553 1.34562 1.34562	1.34627 1.34619 1.34610 1.34589 1.34587 1.34573 1.34573 1.34556 1.34533 1.34521 1.34502
0.0 2.0 4.0 6.0 6.0 10.0 12.0 14.0 16.0 16.0 70.0	1.339A0 1.33956 1.33956 1.33950 1.33943 1.33971 1.33908 1.33877 1.33860	1.34061 1.34059 1.34059 1.34040 1.34040 1.34018 1.34018 1.34004 1.33954	1.341e2 1.34159 1.34154 1.34197 1.34127 1.34114 1.34090 1.34080 1.34086	15.0 1.34265 1.34259 1.34253 1.342745 1.34224 1.34210 1.34178 1.34178 1.34178	20.0 1.34364 1.34359 1.34352 1.34343 1.34306 1.34290 1.34273 1.34265 1.34236	25.0 1.34465 1.34459 1.34451 1.34418 1.34418 1.34402 1.34386 1.34363 1.34350	1.34566 1.34559 1.34551 1.34520 1.34520 1.34515 1.34699 1.34482 1.34445	1.34586 1.34579 1.34571 1.34548 1.34548 1.34534 1.34518 1.34548 1.34644	1.34507 1.34590 1.34540 1.34547 1.34553 1.34537 1.34520 1.34502 1.34402	1.34627 1.34619 1.34610 1.34599 1.34587 1.34573 1.34576 1.34537 1.34521 1.34502 1.34502
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0.65 2.07 4.07 4.07 6.07 11.07 11.07 11.07 11.07 21.07 24.07	1.33960 1.33951 1.33951 1.33951 1.33953 1.33951 1.33951 1.33851 1.33851 1.33871 1.33871 1.33871 1.33873 1.3460 1.22777 1.33753 34.0	1.34051 1.34059 1.34059 1.34064 1.34018 1.34018 1.34934 1.33934 1.3393 1.3395 1.3395 1.3395 1.3386 1.33463 1.34650	1.34162 1.34159 1.34154 1.34127 1.34114 1.34019 1.36083 1.34066 1.34068 1.34008 1.33983 1.33939 36.0 1.34688 1.34688 1.34680 1.34670 1.34658	15.0 1.34263 1.34259 1.34259 1.34251 1.34210 1.41195 1.34161 1.34162 1.34102 1.34080	20.0 1.34364 1.34359 1.34352 1.34333 1.34320 1.34290 1.34273 1.34273 1.34273 1.34173 1.34174 1.34174 1.34174 1.34174 1.34719 1.34719 1.34719 1.34719 1.34719 1.34719 1.34719 1.34719 1.34719 1.34719 1.34570 1.34570 1.34570 1.34571 1.34574 1.34576 1.34576 1.34576 1.34576 1.34576 1.34576 1.34576	25.0  1.34465 1.34459 1.34451 1.34451 1.34462 1.34368 1.34368 1.34269 1.34269 1.34270 1.34748 1.34740 1.34740 1.34740 1.34740 1.34740 1.34740 1.34770 1.34770 1.34770 1.34770 1.34770 1.34770 1.34650 1.34575 1.34575 1.34575	1.34566 1.34559 1.34559 1.34551 1.34569 1.34482 1.34465 1.34465 1.34382 1.34381 40.0 1.34760 1.34760 1.34776 1.34776 1.34786 1.34381 40.0 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34766 1.34566 1.34566 1.34566	1.34586 1.34579 1.34571 1.34548 1.34534 1.34534 1.34534 1.34433 1.34443 1.34421 1.34378 1.34378 1.34378 1.34379 1.34777 1.34777 1.34743 1.34757 1.34753 1.34540 1.34540 1.34540 1.34540	1.34007 1.34599 1.34590 1.34507 1.34507 1.34527 1.34522 1.34402 1.34403 1.34420 1.34420 1.34397 1.34397 1.34397 1.34397 1.34397 1.34797 1.34793 1.34797 1.34793 1.34797 1.34793 1.34971 1.34981 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971	1.34627 1.34619 1.34610 1.34599 1.34587 1.34557 1.34573 1.34556 1.34539 1.34521 1.34522 1.34481 1.34439 1.34415 1.34439 1.34415 1.34391 1.34450 1.34829 1.34820 1.34620 1.34620 1.34620 1.34620 1.34620 1.34620

AND THE PROPERTY OF THE PROPER

Table A-1. (cont)

### PALIBITY (*/ma)    0.0											
0.0 1.33844 1.33996 1.30006 1.00006 1.0014 1.34046 1.34047 1.3						(•)					λ = 400 m
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,				10.0				30.0		32.0	77.0
1.38462   1.38462   1.38462   1.38461   1.38261   1.38261   1.38460   1.38460   1.38460   1.38460   1.38460   1.38460   1.38461   1.38	-										
1.3849   1.3939   1.3902   1.3413   1.3423   1.3424   1.3442   1.3441   1.3441   1.3444   1.3445   1											
6.0   1.33824   1.33922   1.34027   1.34127   1.34225   1.34021   1.34420   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.34440   1.33924   1.33921   1.34840   1.34421											
10.0	6.0										
12.0											
18.0							1.34284	1.34380	1.34399		
1,33762   1,3380.   1,33951   1,2403.   1,2403.   1,2433.   1,2423.   1,2434.   1,2446.   1,24											
22.0 1.33726 1.33829 1.33921 1.33022 1.34006 1.34029 1.34026 1.34037 1.34326 1.34305 1.34326 1.34305 1.34326 1.34306 1.34326 1.33006 1.33105 1.33106 1											
22.0 1.33705 1.33706 1.33870 1.33891 1.33902 1.33902 1.34078 1.34078 1.34274 1.34244 1.34222 1.34301 1.34241 1.34242 1.34221 1.34229 1.34271 1.34224 1.34201 1.33245 1.33372 1.33846 1.33939 1.34031 1.34124 1.34226 1.34229 1.34227 1.34222 1.34220 1.33227 1.34227 1			1.33839	1.33932	1.34026	1.34120	1.34213	1.34307	1.34324	1.34345	1.34343
28.0 1.33661 1.33776 1.33661 1.33726 1.33982 1.33055 1.34169 1.34260 1.34225 1.34227 1.34227 1.32228 1.33227 1.33822 1.33921 1.33007 1.34009 1.34191 1.34220 1.34225 1.32227 1.32228 1.33227 1.33822 1.33921 1.33007 1.34009 1.34191 1.34220 1.34227 1											
28.0 1.33361 1.33750 1.33876 1.33897 1.34031 1.34124 1.34216 1.34225 1.34227 1.34227 1.34227 1.34227 1.33287 1.33227 1											
1.34527   1.34546   1.34547   1.34588   1.34608   1.34608   1.34618   1.34688   1.34	28.0	1.33661	1.33754	1.33846	1.33939	1.34031	1.34124	1.34216			
0.0	30.0	1.33438	1.33730	1.33822	1.33915	1.34007	1.34099	1.34191	1.34210	1.34228	1.34247
2,0		34.0	35.0	34.0	37.0	0.86	39.0	40.0	41.0	42.0	43.0
2,0	0.0	1.34527	1.34548								
8.0   1.34679   1.34510   1.34520   1.34558   1.34572   1.34517   1.34617   1.34621	2.0	1.34520									
8.0											
12.00											1.34662
1,94400   1,34401   1,34471   1,34471   1,34471   1,34510   1,34520   1,34572   1,34577   1,34577   1,34571   1,34572   1,34											
1.30											
22-00				1.34459	1.34475	1.34497	1.34516	1.34535	1.34554	1.34:73	1.34592
22.0											
1,34290   1,34294   1,34294   1,34302   1,34321   1,34346   1,34394   1,34301   1,34401   1,34402   1,34438   1,34402   1,34438   1,34432   1,34332   1,34332   1,34332   1,34332   1,34402   1,33737   1,33834   1,33939   1,34032   1,34137   1,34236   1,34332   1,34335   1,34355   1,34355   1,34355   1,34354   1,34333   1,34332   1,34332   1,34332   1,34333   1,34332   1,34332   1,34332   1,34333   1,34332   1,34332   1,34332   1,34333   1,34332   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,33333   1,34332   1,33333   1,34333   1,34332   1,34333   1,34332   1,34333   1,34332   1,33333   1,34332   1,33333   1,34432   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34443   1,34	24.0		1.34356	1.34375	1.34394	1.34412	1.34431	1.34450	1.34468	1.34487	1.34505
1,34265											
C											
### OC   0.0   5.0   10.0   15.0   20.0   25.0   30.0   31.0   32.0   33.0    0.0   1.33742   1.33841   1.33942   1.34042   1.34142   1.34242   1.34345   1.34355   1.34355   1.34375    2.0   1.33740   1.33831   1.33933   1.34042   1.34137   1.34224   1.34335   1.34355   1.34375   1.34395    4.0   1.33737   1.33835   1.33933   1.34032   1.34130   1.34228   1.34327   1.34360   1.34364   1.34386    6.0   1.33731   1.33827   1.33928   1.33928   1.34023   1.34130   1.34228   1.34327   1.34360   1.34364   1.34364    6.0   1.33713   1.33827   1.33928   1.33928   1.34023   1.34110   1.34228   1.34332   1.34323   1.34342   1.34381    10.0   1.33714   1.33810   1.33996   1.34002   1.34008   1.34194   1.34290   1.34303   1.34322   1.34321    12.0   1.33731   1.33810   1.33996   1.34002   1.34008   1.34194   1.34270   1.34274   1.34281   1.34332    14.0   1.33691   1.33735   1.33880   1.33974   1.34069   1.34164   1.34259   1.34274   1.34281   1.34281    16.0   1.33617   1.33714   1.33864   1.33991   1.34035   1.34128   1.34274   1.34292   1.34278   1.34278    16.0   1.3361   1.33734   1.33867   1.33867   1.34035   1.34128   1.34221   1.34200   1.34228   1.34278    20.0   1.3361   1.33734   1.33809   1.33901   1.34035   1.34128   1.34221   1.34200   1.34229   1.34278    24.0   1.3361   1.33731   1.33809   1.33902   1.33995   1.34081   1.34181   1.34199   1.34221    24.0   1.3361   1.33731   1.33809   1.33902   1.33995   1.34080   1.34181   1.34194   1.34219    24.0   1.3361   1.3361   1.33754   1.33809   1.33959   1.33051   1.33951   1.34181   1.34191   1.34191    24.0   1.3361   1.34442   1.34442   1.34444   1.34594   1.34591   1.34191   1.34191    24.0   1.3361   1.34442   1.34445   1.34446   1.34494   1.34514   1.34497   1.34593   1.34593    25.0   1.34415   1.34434   1.34454   1.34464   1.34594   1.34551   1.34593   1.34593   1.34593    25.0   1.34415   1.34442   1.34445   1.34446   1.34446   1.34594   1.34591   1.34593   1.34593   1.34593    26.0   1.34415   1.34442   1.34455   1.34447   1.34446   1.34596   1.34597						(1)					) - 600 m
0.0 1.33742 1.33841 1.33992 1.34042 1.34142 1.34242 1.34362 1.34362 1.34382 1.34402 2.0 1.33730 1.33839 1.33939 1.34038 1.34137 1.34236 1.34335 1.34355 1.34375 1.34296 4.0 1.33731 1.33825 1.33933 1.34032 1.34130 1.34228 1.34327 1.34396 1.34335 1.34325 1.34236 1.34327 1.33231 1.33826 1.33917 1.34013 1.34110 1.34207 1.34313 1.34335 1.34325 1.34325 1.34326 1.33721 1.33820 1.33917 1.34013 1.34110 1.34207 1.34303 1.34323 1.34323 1.34321 1.34210 1.33274 1.33810 1.33989 1.34084 1.34161 1.34290 1.34390 1.3328 1.34323 1.34321 1.20 1.33703 1.33798 1.33894 1.33989 1.34084 1.34194 1.34290 1.34290 1.34290 1.34291 1.34211 1.34211 1.34211 1.34211 1.34277 1.34296 1.34313 1.34322 1.00 1.33917 1.33171 1.33804 1.33999 1.34084 1.34194 1.34290 1.34277 1.34277 1.34296 1.34313 1.34322 1.00 1.33641 1.33717 1.33804 1.33999 1.34053 1.34124 1.34290 1.34277 1.34279 1.34278 1.34277 1.34296 1.34296 1.34290 1.34		<del></del>			SAI	LIMITY (0,	/80) ———				
2.0 1.33740 1.33837 1.33837 1.33837 1.34038 1.34037 1.34236 1.34335 1.34355 1.34375 1.34395 4.0 1.33737 1.33835 1.33835 1.34032 1.34130 1.3428 1.34327 1.34346 1.34347 1.34248 1.34341 1.34441	°c	. 0.0	5.0	10.0	15.0	20.0	25.0	30.0	31 •0	32.0	33.0
1.33737											
6.0											
10.0											
1.33703			1.33820			1434171	1.3421#		1.34335		
14.0		1022117				1.34110	1.34207	1.34303	1.54323	1.34355	1.34374
18.0		1.33703	1.33810	1.33904	1.34002	1.34110	1.34207	1.34303	1.54323	1.34355 1.34342 1.34328	1.34374 1.34361 1.34347
20.0		1.33491	1.33010 1.33740 1.33765	1.33906 1.33894 1.33880	1.34002 1.33989 1.33974	1.34110 1.34098 1.34084 1.34069	1.34207 1.34194 1.34179 1.34164	1.34303 1.34290 1.34274 1.34259	1.54323 1.34309 1.34243 1.34277	1.34355 1.34342 1.34328 1.34313 1.34296	1.34374 1.34361 1.34347 1.34332 1.34315
22.0	10.0	1.33691	1.33810 1.33748 1.33765 1.33771	1.33904 1.33894 1.33860 1.33864	1.34002 1.33909 1.33974 1.33959	1.34110 1.34098 1.34084 1.34069 1.34053	1.34207 1.34194 1.34179 1.34164 1.34146	1.34303 1.34290 1.34274 1.34259 1.34740	1.34323 1.34309 1.34293 1.34277 1.34259	1.34355 1.34342 1.34328 1.34313 1.34296 1.34278	1.34361 1.34361 1.34347 1.34332 1.34315 1.36297
28.0	10.0	1.33691 1.33677 1.33661	1.33610 1.33748 1.33765 1.33771 1.33754	1.33904 1.33894 1.33860 1.33864 1.33847	1.34002 1.33989 1.33974 1.33959 1.33941	1.34110 1.34098 1.34084 1.34069 1.34053 1.34035	1.34207 1.34194 1.34179 1.34164 1.34166	1.34303 1.34290 1.34274 1.34250 1.34240 1.34221	1.34323 1.34309 1.34293 1.34277 1.34259 1.34240	1.34355 1.34342 1.34328 1.34313 1.34296 1.34278 1.34259	1.34374 1.34361 1.34347 1.34332 1.34315 1.34278
28.0 1.33590 1.33692 1.33744 1.33836 1.33928 1.33928 1.34020 1.34112 1.34130 1.34149 1.34147 1.34142 1.33537 1.33537 1.33628 1.33720 1.33912 1.33904 1.33995 1.34087 1.34106 1.34124 1.34142 1	10.0 10.0 20.0 22.0	1.33691 1.33677 1.33661 1.33643 1.33624	1.33610 1.33748 1.33745 1.33771 1.33754 1.33754	1.33906 1.33894 1.33864 1.33847 1.33829 1.33809	1.34002 1.33989 1.33974 1.33959 1.33941 1.33922 1.33902	1.34110 1.34098 1.34084 1.34069 1.34053 1.34035 1.34015	1.34207 1.34194 1.34179 1.34164 1.34166 1.34128 1.34108	1.34303 1.34290 1.34274 1.34259 1.34240 1.34221 1.34202 1.34181	1.54323 1.34309 1.34243 1.34277 1.34259 1.34240 1.34220 1.34199	1.34355 1.34342 1.34313 1.34278 1.34278 1.34259 1.34239 1.34218	1.34374 1.34361 1.34347 1.34332 1.34315 1.34297 1.34278 1.34257 1.34236
34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0  0.0 1.34422 1.34442 1.34462 1.34482 1.34502 1.34502 1.34542 1.34562 1.34582 1.34602 2.0 1.34415 1.34434 1.34454 1.34474 1.34494 1.34514 1.34533 1.34553 1.34573 1.34593 4.0 1.34605 1.34425 1.34435 1.34444 1.34484 1.34504 1.34533 1.34553 1.34573 1.34593 6.0 1.34394 1.34413 1.34433 1.34452 1.34444 1.34504 1.34514 1.34531 1.34530 1.34550 1.34564 P.O 1.34394 1.34413 1.34433 1.34452 1.34454 1.34491 1.34511 1.34531 1.34531 1.34551 1.34554 P.O 1.34381 1.34400 1.34420 1.34432 1.34454 1.34491 1.34491 1.34511 1.34531 1.34551 1.34551 10.0 1.34364 1.34370 1.34370 1.34402 1.34402 1.34443 1.34462 1.34481 1.34497 1.34516 1.34535 1.34552 14.0 1.34334 1.34353 1.34372 1.34381 1.34402 1.34440 1.34464 1.34464 1.34464 1.34464 1.34464 1.34504 1.34548 1.34504 1.35310 1.35312 1.35312 1.34373 1.34321 1.34510 1.34610 1.34629 1.34464 1.34646 1	16.0 16.0 20.0 22.0 24.0	1.33691 1.33677 1.33661 1.33643 1.33624	1.33610 1.33748 1.33765 1.33771 1.33754 1.33776 1.33646	1.33906 1.33894 1.33864 1.33864 1.33829 1.33809 1.33789	1.34002 1.33989 1.33974 1.33959 1.33941 1.33922 1.33902	1.34110 1.34098 1.34084 1.34069 1.34035 1.34035 1.34015 1.33995	1.34207 1.34194 1.34179 1.34164 1.34128 1.34108 1.34088 1.34086	1.34303 1.34290 1.34274 1.34259 1.34221 1.34202 1.34181 1.34159	1.54323 1.34309 1.34243 1.34277 1.34259 1.34240 1.34220 1.34199 1.34177	1.34355 1.34342 1.34313 1.34296 1.34278 1.34259 1.34239 1.34218 1.34196	1.34374 1.34361 1.34337 1.34332 1.34315 1.342297 1.34278 1.34278 1.34236 1.34214
0.0	16.0 16.0 20.0 22.0 24.0 26.0	1.33691 1.33677 1.33641 1.33643 1.3364 1.3360 1.33563	1.33610 1.33798 1.33795 1.33771 1.33754 1.33717 1.33696 1.33675 1.33652	1.33906 1.33894 1.33864 1.33864 1.33827 1.33809 1.33707 1.33749	1.34002 1.33989 1.33974 1.33959 1.33941 1.33902 1.33859 1.33859	1.34110 1.34098 1.34069 1.34053 1.34035 1.34015 1.33975 1.33975 1.33952 1.33952	1.34207 1.34194 1.34179 1.34184 1.34128 1.34108 1.34084 1.34084 1.34084	1.34303 1.34290 1.34274 1.34258 1.34260 1.34202 1.34181 1.34159 1.34136 1.34112	1.54323 1.34309 1.34273 1.34279 1.34259 1.34260 1.34199 1.34177 1.34154 1.34154	1.34355 1.34342 1.34313 1.34276 1.34278 1.34279 1.34219 1.34190 1.34190 1.34190	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34236 1.34216 1.34216 1.34191 1.34107
2.0	10.0 10.0 20.0 22.0 24.0 24.0 26.0	1.33691 1.33677 1.33641 1.33643 1.3364 1.3360 1.33563	1.33610 1.33798 1.33795 1.33771 1.33754 1.33717 1.33696 1.33675 1.33652	1.33906 1.33894 1.33864 1.33864 1.33827 1.33809 1.33707 1.33749	1.34002 1.33989 1.33974 1.33959 1.33941 1.33902 1.33859 1.33859	1.34110 1.34098 1.34069 1.34053 1.34035 1.34015 1.33975 1.33975 1.33952 1.33952	1.34207 1.34194 1.34179 1.34184 1.34128 1.34108 1.34084 1.34084 1.34084	1.34303 1.34290 1.34274 1.34258 1.34260 1.34202 1.34181 1.34159 1.34136 1.34112	1.54323 1.34309 1.34273 1.34279 1.34259 1.34260 1.34199 1.34177 1.34154 1.34154	1.34355 1.34342 1.34313 1.34276 1.34278 1.34279 1.34219 1.34190 1.34190 1.34190	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34236 1.34216 1.34216 1.34191 1.34107
4.0	10.0 10.0 20.0 22.0 24.0 24.0 26.0	1.33691 1.33671 1.33641 1.33643 1.33644 1.33560 1.33563 1.33560	1.33610 1.33745 1.33775 1.33754 1.33754 1.33646 1.33646 1.33675 1.33652	1.33996 1.33894 1.33880 1.33847 1.33829 1.33809 1.33749 1.33744 1.33740	1.34002 1.33989 1.33974 1.33959 1.33961 1.33902 1.33801 1.33859 1.33836 1.33012	1.34110 1.34084 1.34084 1.34053 1.34035 1.34015 1.33995 1.33975 1.33952 1.33952	1.34207 1.34194 1.34179 1.34104 1.34128 1.34108 1.34008 1.34008 1.34004 1.34004 1.34004 1.34004	1.34303 1.34270 1.34274 1.34258 1.34261 1.34221 1.34202 1.34181 1.34154 1.34134 1.34134	1.54323 1.34309 1.34293 1.34277 1.34259 1.34240 1.34220 1.34199 1.34173 1.36154 1.34106	1.34355 1.34362 1.34313 1.34296 1.34278 1.34279 1.34279 1.34218 1.34196 1.34191 1.34194	1.34374 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34236 1.34216 1.34216 1.34191 1.34167
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14.0	10-0 14-0 20-0 22-0 24-0 24-0 28-0 30-0	1.33491 1.33613 1.33643 1.33643 1.33604 1.33543 1.33563 1.33557 34.0 1.34422 1.34415 1.34405 1.34341	1.33610 1.33778 1.33771 1.33771 1.33754 1.33756 1.33696 1.33675 1.33692 1.33628 35.0 1.3442 1.34434 1.34425 1.34413	1.33906 1.33864 1.33864 1.33864 1.33879 1.33707 1.33707 1.33707 1.33744 1.33720 36.0 1.34462 1.34454 1.34453 1.34443	1.34002 1.33989 1.33974 1.33992 1.33992 1.33902 1.33801 1.33859 1.33836 1.33812 37.0 1.3482 1.34454 1.34454 1.34454	1.34110 1.34084 1.34084 1.34085 1.34035 1.34035 1.33952 1.33974 1.33952 1.33904 38.0 1.34502 1.34494 1.34484 1.34472 1.34474	1.34207 1.34194 1.34194 1.34104 1.34128 1.34108 1.34006 1.34006 1.34006 1.34006 1.34006 1.34006 1.3401	1.34303 1.34270 1.34274 1.34270 1.34221 1.34202 1.34150 1.34150 1.34150 1.34150 1.34513 1.345087	1.34323 1.34329 1.34273 1.34279 1.34240 1.34220 1.34177 1.34154 1.34106 41.0 1.34562 1.34553 1.34543 1.34543	1.34355 1.34342 1.34313 1.34278 1.34278 1.34278 1.34239 1.34239 1.34173 1.34149 1.34124 42.0 1.34573 1.34593 1.34593 1.34535	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34278 1.34214 1.34191 1.34191 1.34167 1.34167 1.34569 1.34569 1.34569 1.34569 1.34569
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20.0 1.34276 1.34295 1.34313 1.34332 1.34351 1.34369 1.34388 1.34406 1.34425 1.34444 27.0 1.34255 1.34273 1.34272 1.34311 1.34329 1.34348 1.34346 1.34385 1.34403 1.34222 1.34311 1.34329 1.34348 1.34346 1.34385 1.34403 1.34422 1.34329 1.34231 1.34399 1.34231 1.34281 1.34281 1.34285 1.34281 1.34399 1.34310 1.34281 1.34281 1.34285 1.34285 1.34285 1.34285 1.34285 1.34315 1.34335 1.34376 28.01 1.34186 1.34204 1.34223 1.34281 1.34259 1.34278 1.34278 1.34335 1.34335 1.34351	10-0 14-0 20-0 22-0 24-0 24-0 24-0 24-0 30-0 0-6 2-0 4-0 6-0 P-0 10-0	1.33491 1.33613 1.33643 1.33643 1.33560 1.33560 1.33560 1.33537 34.0 1.34422 1.34415 1.34405 1.34381 1.34364 1.34381	1.33610 1.33798 1.33771 1.33774 1.33754 1.33756 1.33696 1.33696 1.33628 35.0 1.34425 1.34434 1.34443 1.34443 1.34434 1.34434	1-33906 1-33894 1-33860 1-33867 1-33829 1-33707 1-33749 1-33749 1-33740 1-34454 1-34454 1-34454 1-34453 1-34430 1-34430	1.34002 1.33989 1.33974 1.33951 1.33922 1.33801 1.33859 1.33812 37.0 1.3462 1.34464 1.34464 1.34463 1.34463 1.34463	1.34110 1.34084 1.34084 1.34063 1.34013 1.34013 1.33975 1.33976 1.33976 1.33928 1.33928 1.33928 1.34484 1.34484 1.34484 1.34484 1.34484 1.34484 1.34484 1.34484 1.34484 1.34484	1.34207 1.34194 1.34119 1.34164 1.34128 1.34108 1.34084 1.34084 1.34020 1.33995 39.0 1.34522 1.34514 1.3468 1.34491 1.34478 1.34478 1.34478	1.34303 1.34274 1.34274 1.34274 1.34272 1.34202 1.34101 1.34154 1.34112 1.34087 40.0 1.34523 1.34523 1.34521 1.34677 1.34465	1.54323 1.34309 1.34243 1.34277 1.34250 1.34240 1.34200 1.34199 1.34177 1.34154 1.34106 41.00 1.34562 1.34553 1.34553 1.34530 1.34516 1.34500 1.34500	1.34355 1.34328 1.34278 1.34278 1.34278 1.34259 1.34238 1.34196 1.34174 1.34124 42.0 1.34573 1.34507 1.34550 1.34550 1.34550	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34216 1.34216 1.34216 1.34191 1.34167 1.34162 43.0 1.34602 1.34593 1.34593 1.34593 1.34593 1.34593
27.0 1.34295 1.34273 1.34292 1.34311 1.34329 1.34348 1.34385 1.34385 1.34403 1.34422 24.0 1.34233 1.34211 1.34270 1.34288 1.34307 1.34326 1.34344 1.34385 1.34381 1.34399 26.0 1.34210 1.34228 1.34247 1.34284 1.34284 1.34321 1.34339 1.34331 1.34331 1.34381 1.34284 1.34284 1.3428 1.34281 1.34333 1.34351	10-0 18-0 20-0 22-0 24-0 24-0 28-0 37-0 0-0 4-0 6-0 F-0 10-0 12-0 14-0 15-7	1.33491 1.33613 1.33624 1.33604 1.33563 1.33560 1.33537 34.0 1.34455 1.34415 1.34415 1.34364 1.34364 1.34364 1.34364 1.34364 1.34364	1.33610 1.33748 1.33771 1.33771 1.33776 1.33776 1.33675 1.33672 1.33652 1.33628 35.0 1.3442 1.3442 1.3442 1.3443 1.34373 1.34373 1.34373 1.34373 1.34373	1.33906 1.33864 1.33867 1.33829 1.33709 1.33709 1.33709 1.33700 36.0 1.34462 1.34451 1.34430 1.34430 1.34430 1.34389 1.34389 1.34389	1.34002 1.33989 1.33974 1.33992 1.33902 1.33802 1.33803 1.33836 1.33812 37.0 1.34474 1.34464 1.34492 1.34494 1.34494 1.34494 1.34494 1.34494	1.34110 1.34084 1.34084 1.34065 1.34015 1.34015 1.33975 1.33976 1.33952 1.33928 1.33904 38.0 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494	1.34207 1.34194 1.34104 1.34128 1.34108 1.34088 1.34086 1.34020 1.33995 39.0 1.34514 1.34514 1.34514 1.34418 1.34418 1.34418 1.34418 1.34418 1.34418	1.34303 1.34274 1.34274 1.34272 1.34202 1.34202 1.34101 1.34159 1.34112 1.34007 40.0 1.34533 1.34533 1.34523 1.34573 1.34481 1.34481 1.34481 1.34481 1.34481	1.54323 1.34309 1.34279 1.34279 1.34220 1.34220 1.34199 1.34177 1.34154 1.34130 1.34106 41.0 1.34553 1.34553 1.34553 1.34543 1.34510 1.34540 1.34540 1.34540 1.34540	1.34355 1.34328 1.34313 1.34278 1.34278 1.34278 1.34218 1.34173 1.34191 1.34124 42.0 1.34573 1.34593 1.34593 1.34593 1.34593 1.34590 1.34590 1.34590 1.34590 1.34590 1.34590	1.34324 1.34321 1.34327 1.34332 1.34315 1.34297 1.34278 1.34296 1.34216 1.34216 1.34191 1.34167 1.34142 43.0 1.34602 1.34593 1.34592 1.34589 1.34589 1.34589 1.34589 1.34589 1.34589 1.34589 1.34589
24.0 1.34233 1.34291 1.34270 1.34280 1.34307 1.34326 1.34344 1.34382 1.34381 1.34389 26.0 1.34210 1.34224 1.34247 1.34265 1.34284 1.34332 1.34321 1.34339 1.34358 1.34376 28.0 1.34186 1.34204 1.34223 1.34241 1.34258 1.34278 1.34270 1.34315 1.34351	10-0 14-0 20-0 22-0 24-0 24-0 24-0 24-0 2-0 4-0 4-0 10-0 12-0 14-0 13-0	1.33491 1.33613 1.33643 1.33643 1.33560 1.33560 1.33560 1.33537 34.0 1.34422 1.34415 1.34405 1.34381 1.34381 1.34381 1.34381 1.34381 1.34381 1.34381 1.34381 1.34381 1.34381	1.33610 1.33795 1.33771 1.33774 1.33754 1.33756 1.33696 1.33696 1.33692 1.33692 1.33692 1.34425 1.34426 1.34426 1.34436 1.34436 1.34436 1.34363 1.34363 1.34363 1.34363 1.34363	1.33906 1.33864 1.33864 1.33867 1.33829 1.33707 1.33707 1.33746 1.33720 36.0 1.34455 1.34456 1.34456 1.34433 1.34620 1.34634 1.34636 1.34636 1.34636 1.34636 1.34636 1.34636	1.34002 1.33989 1.33974 1.33959 1.33902 1.33801 1.33802 1.33802 1.33802 1.34074 1.34474 1.34464 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494	1.34110 1.34084 1.34089 1.34053 1.34013 1.34013 1.33975 1.33976 1.33970 1.33970 1.34044 1.3449 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.34494 1.3449 1.34494 1.3449 1.34	1.34207 1.34179 1.34164 1.34128 1.34108 1.34084 1.34084 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34480 1.34480 1.34480 1.34480 1.34480	1.34303 1.34274 1.34274 1.34274 1.34272 1.34202 1.34194 1.34194 1.34112 1.34087 40.0 1.34523 1.34573 1.34573 1.34571 1.34465 1.34467 1.34467 1.34467	1.54323 1.34309 1.34243 1.34277 1.34250 1.34240 1.34199 1.34191 1.34106 41.0 1.34503 1.34503 1.34553 1.34553 1.34553 1.34563 1.34564 1.34644 1.34464 1.34464	1.34355 1.34343 1.34313 1.34278 1.34278 1.34278 1.34239 1.34218 1.34194 1.34124 42.0 1.34527 1.34527 1.34527 1.34527 1.34527 1.34527 1.34527 1.34527 1.34527	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34278 1.34214 1.34214 1.34191 1.34167 1.34167 1.34162 1.34583 1.34582 1.34589 1.34589 1.34599 1.34522 1.34599 1.34522 1.34504 1.34602 1.34599 1.34522 1.34504 1.34504 1.34602
28a1 1.34186 1.34204 1.34723 1.34241 1.34259 1.34278 1.34296 1.34315 1.34333 1.34351	10-0 14-0 20-0 22-0 24-0 24-0 24-0 28-0 30-0 0-6 6-0 6-0 10-0 12-0 14-0 13-0 20-0	1.33491 1.33641 1.33643 1.33664 1.33560 1.33560 1.33537 34.0 1.34422 1.34415 1.34415 1.34415 1.34364 1.34364 1.34361 1.34376 1.34376 1.34376 1.34376 1.34376 1.34376 1.34376	1-33610 1-33798 1-33771 1-33754 1-33775 1-33696 1-33697 1-33692 1-33692 1-34413 1-34434 1-34434 1-34435 1-34400 1-34373 1-34400 1-34373 1-34475 1-34475	1.33906 1.33864 1.33864 1.33867 1.33807 1.33807 1.33707 1.33707 1.33707 1.33700 1.34402 1.34454 1.34433 1.34420 1.34433 1.34420 1.34372 1.34373 1.34373 1.34373 1.34373 1.34373	1.34002 1.33989 1.33974 1.33951 1.33961 1.33962 1.33861 1.33865 1.33862 1.34652 1.34474 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452 1.34452	1.34110 1.34084 1.34084 1.34085 1.34015 1.34015 1.33975 1.33976 1.33978 1.33978 1.33978 1.33978 1.33978 1.34494 1.34494 1.34494 1.34472 1.34450 1.34472 1.34450 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34473 1.34371 1.34371 1.34371	1.34207 1.34194 1.34194 1.34108 1.34108 1.34084 1.34084 1.34080 1.34084 1.34020 1.33995 39.0 1.34514 1.34478 1.34481 1.34478 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481 1.34381 1.34381	1.34303 1.34274 1.34274 1.34272 1.34202 1.34202 1.34101 1.34159 1.34112 1.34087 40.0 1.34533 1.34523 1.34533 1.34523 1.34471 1.34481 1.34481 1.34481 1.34481 1.34481 1.34481	1.34323 1.34323 1.34273 1.34279 1.34240 1.34220 1.34199 1.34177 1.34154 1.34100 1.34502 1.34553 1.34553 1.34550 1.34500 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540	1.34355 1.34328 1.34323 1.34278 1.34278 1.34278 1.34278 1.34239 1.34231 1.34194 1.34124 42.0 1.34527 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34693 1.34485 1.34485 1.34485	1.34324 1.34321 1.34347 1.34332 1.34315 1.34297 1.34298 1.34296 1.34216 1.34216 1.34191 1.34167 1.34162 43.0 1.34602 1.34503 1.34502 1.34509 1.34509 1.34509 1.34509 1.34500 1.34400 1.34400 1.34400 1.34400 1.34400 1.34440
	10-0 14-0 20-0 22-0 24-0 24-0 24-0 24-0 0-0 2-0 4-0 4-0 10-0 12-0 14-0 12-0 14-0 20-0 24-0 24-0	1.33491 1.33613 1.33643 1.33643 1.33563 1.33563 1.33563 1.335537 34.0 1.34425 1.34415 1.34405 1.3494 1.34361 1	1.33610 1.33778 1.33773 1.33771 1.33754 1.33756 1.33696 1.33692 1.33692 1.33692 1.34423 1.34423 1.34423 1.34436 1.34363 1.3436 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.3436 1.3	1.33906 1.33864 1.33864 1.33867 1.33829 1.33767 1.33767 1.33746 1.33720 36.0 1.34454 1.34454 1.34454 1.34454 1.34454 1.34438 1.34438 1.34384 1.34387 1.34387 1.34387 1.34292 1.34292	1.34002 1.33989 1.33974 1.33992 1.33902 1.33804 1.33826 1.33826 1.33826 1.34424 1.34424 1.34424 1.34424 1.34424 1.34424 1.34432 1.34424 1.34432 1.34432 1.34431 1.3432 1.3431	1.34110 1.34084 1.34089 1.34083 1.34033 1.34035 1.33952 1.33974 1.33952 1.33954 1.33954 1.33954 1.33454 1.3454 1.3454 1.35	1.34207 1.34194 1.34194 1.34104 1.34128 1.34008 1.34008 1.34008 1.34000 1.33995 39.0 1.33995 39.0 1.34522 1.34514 1.34504 1.34408 1.34408 1.34408 1.34408 1.34408 1.34408 1.34408 1.34408 1.34309 1.34309 1.34309 1.34309 1.34309	1.34303 1.34270 1.34270 1.34270 1.34270 1.34221 1.34202 1.34181 1.34180 1.34112 1.34087 40.0 1.34523 1.34523 1.34523 1.34523 1.3467 1.34467 1.34467 1.34467 1.34467 1.34467 1.34463 1.34344	1.54323 1.34329 1.34240 1.34240 1.34240 1.34240 1.34199 1.34191 1.34106 41.0 1.34502 1.34503 1.34503 1.34503 1.34504 1.34504 1.34504 1.34504 1.34504 1.34504 1.34504 1.34504 1.34404 1.34406 1.34382	1.34355 1.34328 1.34313 1.34278 1.34278 1.34278 1.34278 1.34218 1.34173 1.34149 1.34124 42.0 1.34573 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593 1.34593	1.34324 1.34361 1.34347 1.34332 1.34315 1.36297 1.34278 1.34278 1.34278 1.34214 1.34214 1.34191 1.34191 1.34167 1.34162 1.34569
	10-0 14-0 20-0 22-0 24-0 24-0 24-0 27-0 0-6 0-6 0-6 0-6 0-6 10-0 10-0 12-0 14-0 15-7 18-0 20-0 24-0 24-0 24-0 24-0 24-0	1.33491 1.33613 1.33624 1.33604 1.33560 1.33560 1.33537 34.0 1.34415 1.34415 1.34415 1.34364 1.34364 1.34361 1.34361 1.34361 1.34276 1.34276 1.34231 1.34276 1.34231	1-33610 1-33798 1-33771 1-33754 1-33775 1-33676 1-33675 1-33675 1-33676 1-34434 1-34434 1-34434 1-34435 1-34400 1-34373 1-34373 1-34273 1-34273 1-34273 1-34271	1.33906 1.33864 1.33864 1.33867 1.33829 1.33707 1.33707 1.33707 1.33707 1.33700 1.34456 1.3456	1.34002 1.33989 1.33974 1.33992 1.33992 1.33902 1.33891 1.3389 1.33836 1.33812 37.0 1.34482 1.34454 1.34454 1.34454 1.34454 1.34454 1.34454 1.34352 1.34311 1.34311 1.34285	1.34110 1.34084 1.34084 1.34063 1.34013 1.34013 1.33973 1.33974 1.33973 1.33978 1.33978 1.33978 1.34472 1.34484 1.34472 1.34484 1.34472 1.34484 1.34472 1.34484 1.34472 1.34484 1.34472 1.34484 1.34472 1.34473 1.3447	1.34207 1.34194 1.34194 1.34108 1.34108 1.34084 1.34084 1.34084 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34510 1.34510 1.34510 1.34510 1.34482 1.34480 1.34481 1.34380 1.34380 1.34380 1.34380 1.34380 1.34380 1.34380	1.34303 1.34274 1.34274 1.34272 1.34201 1.34201 1.34181 1.34181 1.34112 1.34007 40.0 1.34533 1.34523 1.34523 1.34521 1.34401 1.34401 1.34401 1.34401 1.34308 1.34534 1.34534 1.34534 1.34534 1.34534 1.34534 1.34534 1.34534	1.54323 1.34309 1.34273 1.34279 1.34220 1.34220 1.34199 1.34177 1.34130 1.34106 41.0 1.34550 1.34550 1.34550 1.34550 1.34550 1.34500 1.3460	1.34355 1.34328 1.34313 1.34278 1.34278 1.34278 1.34218 1.34173 1.34173 1.34173 1.34173 1.34573 1.34503 1.34503 1.34503 1.34505 1.34503	1.34324 1.34321 1.34327 1.34332 1.34315 1.36297 1.34228 1.34297 1.34236 1.34291 1.34216 1.34191 1.34191 1.34102 1.34502 1.34502 1.34502 1.34502 1.34509 1.34559 1.34559 1.34559 1.34559 1.3459 1.3452 1.34500 1.34602 1.34500

Table A-1. (cont)

					(g)					λ = <b>520 am</b>
TEMP				BAL	INITY (e/	<u></u>				
°c	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33649	1.33749	1.33849	1.33949	1.34048	1.34148	1.34248	1.34268	1.34288	1.34307
2.0	1.33648	1.33747	1.33446	1.33944	1.34043	1.34142	1.34241	1.34260	1.34280	1.34300
4.0 6.0	1.33645	1.33742	1.33840	1.33938	1.34036	1.34134	1.34232	1.34251	1.34271	1.34291
8.0	1.33632	1.33728	1.33824	1.33921	1.34017	1.34113	1.34209	1.34229	1.34260	1.34280 1.34267
10.0	1.33673	1.33718	1.33814	1.33909	1.34005	1.34100	1.34196	1.34215	1.34234	1.34253
12.0	1.33612	33707	1.33801	1.33496	1.33991	1.34085	1.34180	1.34199	1.34218	1.34237
14.0	1.33599	1.33643	1.33787	1.33881	1.33975	1.34069	1.34163	1.34182	1-34201	1.34220
16.0 18.0	1.33585	1.33678	1.33772	1.33865 1.33848	1.33958	1.34052	1.34145	1.34164	1.34183	1.34202 1.34182
20.0	1.33551	1.33644	1.33737	1.33829	1.33922	1.34015	1.3-107	1.34126	1.34144	1.34163
22.0	1.33533	1.33625	1.33717	1.33810	1.33902	1.33994	1.34087	1.3410>	1.34123	1.34142
24.0	1.33513	1.33605	1.33697	1.73789	1.33881	1.33973	1.34065	1.34084	1.34102	1-34120
26.0 28.0	1.33492 1.33470	1.33584	1.33676	1.33767	1.33859	1.33951	1.340+3	1.34061	34079 l.34055	1.34097
30.0	1.33415	1.33537	1.33628	1.33720	1.33611	1.33902	1.33994	1.34012	1.34030	1.34049
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34328	1.34347	1.34368	1.34387	1.34300	1.34427	1.34447	1.34467	1.34487	1.34507
4.0	1.34320	1.34330	1.34359	1.34369	1.34399	1.34416	1.34438	1.34458	1.34478	1.34497 1.34486
6.0	1.34299	1.34318	1.34338	1.34357	1.34376	1.34396	1.34415	1.34435	1.34454	1.34474
6.0	1-34286	1.34306	1.34325	1.34344	1.34363	1.34383	1.34402	1.34421	1.34440	1.34460
10.0	1.34272	1.34291	1.34310	1.54329	1.34346	1.34368	1.34387	1.34406	1-34425	1.34444
12.0	1.34256	1.34775	1.34294	1.34313	1.3+332	1.34351	1.34370	1.34389	1.34408	1.34426
14.0 16.6	1.34239 1.34220	1.34257	1 - 34276	1.34295	1.34314	1.34333	1.34352	1.34371	1.34389	1.34408
14.0	1.34201	1.34220	1.3-238	1.34257	1.34275	1.34294	1.34313	1.34331	1-34350	1.34368
20.0	1.34181	1.34200	1.34218	1.34237	1.34255	1.34274	1.34242	1.34311	1.34329	1.24348
27.0	1-34160	1.54179	1.34197	1-34216	1.34734	1.34253	1.34271	1.34289	1.34308	1.34327
24.0 26.0	1.34139	1.34157	1.34175	1-34194	1.54712	1.34231 1.34208	1.34249	1.3426#	1.34266	1.34304 1.34281
210	1. 4092	1.34110	1.34124	1.34147	1.34105	1.34164	1.34202	1.34220	1.34239	1.34257
30.0	1.34067	1.34055	1.34103	1 - 34122	1.34140	1.34158	1.34176	1.34145	1.34213	1.34731
-				•	(h)					λ = <b>540</b> nm
TEMP					INITY (0/		30.0	11.0		
TEMP	0.0	5.0	10.0	<b>SAL</b> 15.0		<b>10)</b>	30.0	31.0	32.0	33.0
0.0	1.33567	1.33667	1.33766	15.0 1.33#65	20.0 1.339u5	25.0 1.34064	1.34164	1.34183	1-34203	33.0
0.0 2.0	1.33567	1.33667	1.33766	15.0 1.33#65 1.33#61	20.0 1.33965 1.33959	25.0 1.34064 1.34057	1.34164	1.34183	1-34203	33.0 1.34223 1.34215
0.0 2.0 4.8	1.33567 1.33565 1.33562	1.33667 1.33664 1.33659	1.33766 1.33762 1.33757	15.0 1.33865 1.33861 1.33854	20.0 1.33965 1.33959 1.33952	25.0 1.34064 1.34057 1.34049	1.34164 1.34156 1.34146	1.34183 1.34175 1.34166	1.34203 1.34195 1.34185	33.0 1.34223 1.34215 1.34205
0.0 2.0	1.33567	1.33667	1.33766	15.0 1.33#65 1.33#61	20.0 1.33965 1.33959	25.0 1.34064 1.34057	1.34164	1.34183	1-34203	33.0 1.34223 1.34215
0.0 2.0 4.0 6.0 8.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541	1.33667 1.33664 1.33659 1.33654 1.33646 1.33636	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732	15.0 1.33465 1.33861 1.33854 1.33847 1.33838 1.33827	20.0 1.339u5 1.33959 1.33952 1.33943 1.33934 1.33972	25.0 1.34064 1.34057 1.34049 1.34040 1.34029 1.34017	1.34164 1.34156 1.34146 1.34136 1.34125	1.34183 1.34175 1.34166 1.34156 1.34144	1.34203 1.34195 1.34185 1.34175 1.34163 1.34150	33.0 1.34223 1.34215 1.34205 1.34194 1.34183 1.34169
0.0 2.0 4.0 6.0 8.0 10.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541 1.33530	1.33667 1.33664 1.33659 1.33654 1.33646 1.33636	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732	15.0 1.33465 1.33861 1.33854 1.33847 1.33838 1.33827 1.33813	20.0 1.33905 1.33959 1.33952 1.33952 1.33943 1.33972 1.33972	25.0 1.34064 1.34057 1.34049 1.34040 1.34029 1.34017 1.34002	1.34164 1.34156 1.34146 1.34136 1.34125 1.34112	1.34183 1.34175 1.34166 1.34156 1.34144 1.34131	1.34203 1.34195 1.34185 1.34175 1.34163 1.34150	33.0 1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34169
0.0 2.0 4.0 6.0 8.0 10.0 17.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541 1.33530 1.33517	1.33667 1.33664 1.33659 1.33654 1.33636 1.33636 1.33624	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732 1.33719	15.0 1.33465 1.33861 1.33854 1.33847 1.33827 1.33813 1.33798	20.0 1.3395 1.33959 1.33952 1.33953 1.33934 1.33972 1.33972 1.33891	25.0 1.34064 1.34057 1.34049 1.34040 1.34021 1.34002 1.34002	1.34164 1.34156 1.34146 1.34136 1.34125 1.34112 1.34096 1.34079	1.34183 1.34175 1.34166 1.34156 1.34134 1.34131 1.34115	1.34203 1.34195 1.34185 1.34175 1.34163 1.34150 1.34134	33.0 1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34153 1.34153
0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0	1.33567 1.33565 1.33557 1.33550 1.33541 1.33530 1.33517 1.33502	1.33667 1.33664 1.33659 1.33654 1.33636 1.33636 1.33624 1.33611 1.33595	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732 1.33719 1.33704	15.0 1.33465 1.33854 1.33857 1.33827 1.33827 1.33813 1.33798	1.339u5 1.339u5 1.339u5 1.339u5 1.339u3 1.339u3 1.339u3 1.339u3 1.339u3 1.339u3 1.339u3 1.339u3 1.339u3	25.0 1.34064 1.34069 1.34040 1.34029 1.34017 1.34017 1.34985	1.34164 1.34156 1.34146 1.34135 1.34125 1.34112 1.34076 1.34079	1.34183 1.34175 1.34166 1.34156 1.34131 1.34131 1.34115 1.34097	1.34203 1.34195 1.34185 1.34175 1.34163 1.34150	33.0 1.34223 1.34215 1.34205 1.34194 1.34169 1.34169 1.34153 1.34151
0.0 2.0 4.0 6.0 8.0 10.0 17.0	1.33567 1.33562 1.33557 1.33557 1.33550 1.33541 1.33507 1.33507 1.33477	1.33667 1.33664 1.33659 1.33656 1.33646 1.33636 1.33624 1.33611 1.33595 1.33579 1.33562	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732 1.33719 1.33679 1.33679	15.0 1.33465 1.33861 1.33847 1.33887 1.33813 1.33788 1.33788 1.33786 1.33787	1.339u5 1.339u5 1.339u5 1.339u5 1.339u5 1.339u5 1.339u3 1.339u7 1.339u7 1.338u7 1.338u7 1.338u7 1.338u7	25.0 1.34064 1.34057 1.34049 1.34040 1.34017 1.34002 1.33965 1.33965 1.33960	1.34164 1.34166 1.34136 1.34125 1.34121 1.34096 1.34079 1.34061 1.34042	1.34183 1.34175 1.34166 1.34156 1.34144 1.34131 1.34115 1.34097 1.34079 1.34081 1.34082	1.34203 1.34195 1.34185 1.34175 1.34163 1.34150 1.34134 1.34048 1.34080 1.34080	33.0 1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34163 1.34117 1.34017 1.34017
0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 18.0 20.0 22.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541 1.33530 1.33517 1.33502 1.33487 1.33470 1.33451	1.33667 1.33664 1.33659 1.33656 1.33636 1.33626 1.33611 1.33595 1.33579 1.33579	1.33766 1.33762 1.33757 1.33750 1.33742 1.33719 1.33714 1.33689 1.33674 1.33654 1.33655	15.0 1.33#65 1.33#54 1.33#54 1.33#3# 1.33#3# 1.33798 1.33798 1.33765 1.33767	101TY (0/ 20.0 1.33955 1.33952 1.33952 1.33993 1.33972 1.33897 1.33875 1.33875 1.33873	25.0 1.34064 1.34057 1.34049 1.34040 1.34002 1.34002 1.33985 1.33986 1.33950 1.33951	1.34164 1.34156 1.34146 1.34136 1.34125 1.34019 1.34079 1.34061 1.34062 1.34073 1.34073	1.34183 1.34175 1.34166 1.34156 1.34144 1.34131 1.34097 1.34097 1.34062 1.34042	1.34203 1.34195 1.34185 1.34163 1.34150 1.34134 1.34116 1.34088 1.34080 1.34080 1.34080	33.0  1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34151 1.34171 1.34090 1.3417
0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 18.0 20.0 22.0 24.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541 1.33502 1.33502 1.33470 1.33471 1.33471	1.33667 1.33664 1.33659 1.33656 1.33661 1.33626 1.33611 1.33595 1.33577 1.33562 1.33563 1.33563	1.33766 1.33762 1.33757 1.33750 1.33762 1.33732 1.33719 1.33704 1.33669 1.33654 1.33654 1.33653	15.0 1.33m65 1.33m54 1.33m54 1.33m37 1.33m38 1.33762 1.33762 1.33765 1.33776 1.33776 1.33776	1.3395 1.3395 1.3395 1.3395 1.3395 1.3395 1.3397 1.3387 1.3387 1.3387 1.3383 1.3383 1.3383 1.3383 1.3383	25.0 1.34064 1.34057 1.34049 1.34040 1.34017 1.34002 1.33908 1.33968 1.33950 1.33931 1.33889	1.34164 1.34156 1.34146 1.34136 1.34112 1.34090 1.34061 1.34062 1.34063 1.34063 1.34073 1.34083	1.34183 1.34175 1.34186 1.34156 1.34141 1.34131 1.34115 1.34077 1.34079 1.34061 1.34042 1.34021	1.34203 1.34195 1.34185 1.34175 1.34150 1.34150 1.34114 1.34048 1.34080 1.34080 1.34080 1.34080	33.0 1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34153 1.34117 1.34096 1.34079 1.34079
0.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 20.0 22.0 24.0 26.0	1.33567 1.33565 1.33562 1.33550 1.33550 1.33517 1.33502 1.33487 1.33470 1.33451 1.33431	1.33667 1.33664 1.33659 1.33656 1.33626 1.33621 1.33579 1.33579 1.33562 1.33562 1.33562 1.33563 1.33563	1.33766 1.33762 1.33757 1.33750 1.33742 1.33732 1.33719 1.33672 1.33654 1.33654 1.33654 1.33654	15.0 1.33#65 1.33#61 1.33#57 1.33#27 1.33#13 1.33798 1.33798 1.33767 1.33747 1.33777 1.33706 1.33767	INITY (0/, 20.0 1.33959 1.33959 1.33953 1.33953 1.33972 1.33972 1.33877 1.33877 1.33873 1.33873 1.33873 1.33873	25.0 1.34064 1.34057 1.34049 1.34049 1.34017 1.34002 1.33985 1.33985 1.33951 1.33931 1.33887	1.34164 1.34156 1.34146 1.34125 1.34112 1.34096 1.34079 1.34042 1.34042 1.34073 1.33981 1.33981	1.34183 1.34175 1.34186 1.34156 1.34131 1.34131 1.3407 1.3407 1.34081 1.34081 1.34081 1.33999 1.33999	1.34203 1.34195 1.34185 1.34175 1.34163 1.34164 1.34016 1.34080 1.34080 1.34080 1.34080 1.34080	33.0  1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34151 1.34171 1.34090 1.3417
0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 18.0 20.0 22.0 24.0	1.33567 1.33565 1.33562 1.33557 1.33550 1.33541 1.33502 1.33502 1.33470 1.33471 1.33471	1.33667 1.33664 1.33659 1.33656 1.33661 1.33626 1.33611 1.33595 1.33577 1.33562 1.33563 1.33563	1.33766 1.33762 1.33757 1.33750 1.33762 1.33732 1.33719 1.33704 1.33669 1.33654 1.33654 1.33653	15.0 1.33m65 1.33m54 1.33m54 1.33m37 1.33m38 1.33762 1.33762 1.33765 1.33776 1.33776 1.33776	1.3395 1.3395 1.3395 1.3395 1.3395 1.3395 1.3397 1.3387 1.3387 1.3387 1.3383 1.3383 1.3383 1.3383 1.3383	25.0 1.34064 1.34057 1.34049 1.34040 1.34017 1.34002 1.33908 1.33968 1.33950 1.33931 1.33889	1.34164 1.34156 1.34146 1.34136 1.34112 1.34090 1.34061 1.34062 1.34063 1.34063 1.34073 1.34083	1.34183 1.34175 1.34186 1.34156 1.34141 1.34131 1.34115 1.34077 1.34079 1.34061 1.34042 1.34021	1.34203 1.34195 1.34185 1.34175 1.34150 1.34150 1.34114 1.34048 1.34080 1.34080 1.34080 1.34080	33.0  1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34153 1.34171 1.34090 1.34079 1.34056 1.34035 1.34035
0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 20.0 22.0 24.0 27.0 27.0	1.33567 1.33565 1.33562 1.33550 1.33550 1.33561 1.33500 1.33487 1.33470 1.33471 1.33431 1.33431	1.33667 1.33664 1.33659 1.33656 1.33646 1.33646 1.33611 1.33595 1.33570 1.33562 1.33562 1.33562 1.33543 1.33562 1.33543	1.33766 1.33762 1.33757 1.33750 1.33762 1.33719 1.33704 1.33672 1.33672 1.33654 1.33635 1.23614	15.0 1.33#65 1.33#61 1.33#57 1.33#37 1.33792 1.33765 1.33765 1.33776 1.33776 1.33776 1.33776 1.3376	101TY (0/ 20.0 1.33959 1.33952 1.33952 1.33993 1.33972 1.33819 1.33819 1.33819 1.33819 1.33772 1.33775 1.33775	25.0 1.34064 1.34057 1.34049 1.34029 1.34017 1.34002 1.33969 1.33969 1.33951 1.33889 1.33889 1.33889	1.34164 1.34156 1.34136 1.34125 1.34122 1.34079 1.34071 1.34042 1.34073 1.34003 1.33981 1.33958	1.34183 1.34175 1.34166 1.34156 1.34131 1.34131 1.34097 1.34097 1.34062 1.34062 1.34062 1.33999	1.34203 1.34195 1.34185 1.34163 1.34150 1.34134 1.34048 1.34080 1.34080 1.34080 1.34080 1.34017 1.33971	33.0  1.34223 1.34215 1.34205 1.34194 1.34183 1.34169 1.34151 1.34109 1.34135 1.34117 1.34099 1.34073 1.34073 1.34073 1.34073
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0.0 2.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 20.0 24.0 24.0 24.0 24.0 24.0 27.0 4.0 6.0 6.0 10.0 11.0 11.0 11.0 11.0 11.0	1.33567 1.33565 1.33562 1.33550 1.33550 1.33571 1.33570 1.33487 1.33470 1.33481 1.33471 1.33431 1.33431 1.33431 1.33421 1.34244 1.34224 1.34224 1.34214 1.34202 1.34108 1.34214 1.34207 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34172 1.34174 1.34174 1.34174 1.34174 1.34074	1.33667 1.33664 1.33659 1.33651 1.33661 1.33611 1.33579 1.33579 1.33552 1.33571 1.33547 1.33547 1.33474 1.3426 1.3426 1.342	1.33766 1.33762 1.33777 1.33773 1.33732 1.33734 1.33734 1.33679 1.33654 1.33654 1.33654 1.33654 1.33654 1.33573 1.33573 1.33574 1.34263 1.3426	15.0  1.33H65 1.33H61 1.33H61 1.33H61 1.33H61 1.33H61 1.33706 1.33767 1.33777 1.33776 1.33776 1.33776 1.33776 1.34376 1.34271 1.3428 1.3419	INITY (0/, 20.0  1.33995 1.33959 1.33959 1.33973 1.33971 1.33819 1.33871 1.33871 1.33875 1.33875 1.33875 1.33875 1.33875 1.34381 1.34770 1.34710 1.3470 1.34201 1.34270 1.34270 1.34271 1.34270 1.34271	25.0  1.34064 1.34057 1.34049 1.34019 1.34002 1.34017 1.34002 1.33985 1.33985 1.33986 1.33981 1.33889 1.33881 39.0 1.34322 1.34323 1.34322 1.34328 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288 1.34288	1.34164 1.34156 1.34126 1.34125 1.34019 1.34079 1.34061 1.34062 1.34003 1.33938 1.33938 1.33938 1.33938 1.33938 1.33938 1.33939 40.0 1.34352 1.34352 1.34352 1.34352 1.34352 1.34362 1.34464	1.34 183 1.34 175 1.34 186 1.34 184 1.34 134 1.34 135 1.34 097 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 091 1.34 391 1.3	1.34203 1.34195 1.34183 1.34163 1.34163 1.34164 1.34080 1.34080 1.34080 1.34080 1.34081 1.34080 1.34081 1.34080 1.34081 1.3408	33.0  1.34223 1.34215 1.34205 1.34205 1.34194 1.34183 1.34193 1.34153 1.34117 1.34079 1.34079 1.34079 1.34073
0-0 2-0 4-0 6-0 8-0 10-0 12-0 14-0 16-0 22-0 24-0 28-0 28-0 30-0 0-0 12-0 14-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 28-0	1.33567 1.33565 1.33565 1.33550 1.33550 1.33517 1.33530 1.33487 1.33487 1.33487 1.33487 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.33451 1.34264 1.3426	1.33667 1.33646 1.33659 1.33666 1.33646 1.33624 1.33511 1.33597 1.33562 1.33562 1.33562 1.33561 1.33562 1.33561 1.33478 1.33496 1.34264 1.34264 1.3427 1.34106 1.34173 1.34106 1.34173 1.34107 1.34116 1.34079 1.34079	1.33766 1.33762 1.33777 1.33779 1.33772 1.33774 1.33774 1.33679 1.33664 1.33654 1.33654 1.33654 1.33654 1.33654 1.33570 1.33545 36.0 1.74283 1.34263 1.34263 1.34264 1.3426 1.3	15.0  1.33#65 1.33#61 1.33#51 1.33#37 1.33#31 1.33765 1.33767 1.33770 1.33767 1.33700 1.33661 1.33661 1.33661 1.33661 1.34263 1.34271 1.34271 1.34281 1.34271 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281	20.0  1.3395 1.33959 1.33959 1.33952 1.33953 1.33972 1.33891 1.33877 1.33830 1.33875 1.33875 1.33875 1.33875 1.33875 1.34279	25.0  1.34064 1.34057 1.34040 1.34040 1.34002 1.34908 1.33968 1.33950 1.33951 1.33869 1.33863 1.35911 1.33869 1.33861 1.35911 1.34261 1.34261 1.34261 1.34261 1.34261 1.34261 1.34261 1.34261 1.34261	1.34164 1.34156 1.34136 1.34132 1.34012 1.34079 1.34062 1.34063 1.33938 1.33938 1.33938 1.33938 1.33938 1.33938 1.33938 1.33938 1.33938 1.34352 1.34352 1.34352 1.34352 1.34362 1.34285 1.34285 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281	1.34 183 1.34 175 1.34 166 1.34 134 1.34 134 1.34 134 1.34 137 1.34 079 1.34 079 1.34 072 1.33 979 1.33 976 1.33 976 1.33 976 1.33 972 1.33 978 1.34 361 1.34 361 1.34 362 1.34 363 1.34 364 1.3	1.34203 1.34195 1.34195 1.34163 1.34150 1.34116 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34080 1.34392 1.34380 1.3438	33.0  1.34223 1.34215 1.34205 1.34205 1.34194 1.34183 1.34183 1.34183 1.34137 1.34090 1.34079 1.34078 1.34078 1.34078 1.34078 1.34078 1.34078 1.34079
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Table A-1. (cont)

					(i)					λ = <b>506</b> nm
TEMP	<u></u>				(°/					
o <sub>C</sub>	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33495	1.33594	1.33652	1.33791	1.33890	1.33966	1.34087	1.34107	1.34126	1.34147
\$•Ğ	1.33493	1.33591	1.33408	1.33767	1.33005	1.33962	1.34081	1.34100	1.34126	1.34139
4.0	1.33489	1.33546	1.33683	1.33781	1.33878	1.33975	1.34072	1.34091	1.34111	1.34130
4.0 4.0	1.33483	1.33579	1.33675	1.33772	1.33668	1.33964	1.34048	1.34060	1.34100	1.34105
10.0	1.33466	1.33561	1.33655	1.33750	1.33845	1.33940	1,34034	1.34053	1.34072	1.34091
12.0	1.33455	1.33545	1.33643	1.33737	1.33831	1.33925	1.34019	1.34038	1.34057	1.34076
14.0	1.33443	1.33536	1.33430	1.33723	1.33017	1.33910	1.34003	1.34022	1.34041	14060
14.0	1.33429	1.33522	1.33415	1.33707	1.33001	1.33893	1.33986	1.34005	1.34023	1.34042
16.0	1.33414	1.33506	1.33599	1.33690	1.33703	1.33675	1.33968	1.33986	1.34004	1.340?2
20.0	1.33397 1.33378	1.33488	1.33581	1.33672	1.33744	1.33855	1.33946	1.33946	1.33704	1.34002 1.33981
22.0 24.0	1.33358	1.33449	1.33540	1.33631	1.33722	1.33013	1.33904	1.33922	1.3 394 1	1.33959
24.0	1.33337	1.33428	1.33518	1.33609	1.33700	1.33740	1.33881	1.33899	1. 3718	1.33936
28.0	1.33315	1.33405	1.33446	1.33586	1.33677	1.33767	1.33858	1.33876	1.3 3495	1.33913
30.0	1.33292	1.333#2	1.33472	1.33563	1.33653	1.33744	1.33#35	1.33053	1.33671	1.33000
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34146	1.34186	1.34205	1.422>	1.34245	1.34265	1.342#4	1.34305	1.34324	1.34344
5.0	1.34159	1.34179	1.34198	1.34218	1.34237	1.34257	1.34276	1.54246	1.34316	1.34335
4.0	1.34149	1.34149	1.34188	1.34208	1-34277	1.34246	1.34267	1.34285	1.34304	1.34325
6-0	1.34136	1.34157	1.34176	1.34196	1.34215	1.34234	1.34254	1.34273	1.34297	1.34311
A.O 10.0	1.34110	1.34129	1.34146	1.34132	1.34201	1.34220	1.34224	1.34258	1.34278	1.34297
12.0	1.34095	1.3411 5	1.34137	1.34151	1.34170	1.341##	1.34207	1.34226	1.34245	1.34264
14.0	1.3407#	1.34097	1. 34114	1.34134	1.34153	1.34171	1.34190	1.34208	1.34227	1.34244
16.0	1.34060	1.34079	1.34097	1.54116	1.34134	1.34155	1-34171	1.34140	1-34208	1.34227
14.0	1.34041	1.34059	1.34078	1.34096	1.34115	1.34133	1.34152	1.34170	1.34189	1.34207
20.0	1.34021	1. 440 49	1.34057	1 . 340 76	1.34094	1.34113	7.>4131	1.34149	1.34168	1.34184
72.0 24.0	1.33499	1.34017	1.34036	1.34054	1.34073	1.34091	1.34109	1.34127	1.34146	1.34164
26.0	1.33475	1.33972	1.33990	1.34009	1.34027	1.34045	1.34063	1.34041	1.3-099	1.34110
20.0	1.33931	1.33449	1.35467	1.33985	1-34003	1.34022	1.34040	1.34058	1.34076	1.34094
10.0	1.33907	1.13925	1. 33943	1.33961	1.33979	1.33998	1.34016	1.34033	1.34051	1.34070
					(i)					λ = <b>580</b> mi
Timer	,			<b>SAI</b>	AMTY (0,	<del></del>				
°C	1 0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33425	1.33524	1.33622	1.33721	1.33819	1.33918	1.34016	1.34034	1.34056	1.34076
5.0	1.33424	1.33522	33619	1.33717	1.33815	1.33912	1.34010	1.34030	1.34049	1.34069
4.0	1.33420	1.33517	1.33614	1.34711	1.35808	1.33905	1.34007	1.34021	1.34041	1.34060
6.0	1.33415	1.33511	1.33607	1.35703	1.33800	1.33#96	1.33992	1.34011	1.34030	1.34050
4.0 10.0	1.33399	1.33503	1.33549	1.33694	1.33749	1.33005	1.33980	1.33999	1.34004	1.34037 1.34073
12.0	1.3336#	1.33482	1.33576	1.33669	1.33761	1.33057	1.33951	1.33969	1.33788	1.34007
14.0	1.33575	1.33468	1.33561	1.33054	1.33748	1.33841	1.33934	1.33953	1.3 3971	1.33990
16.0	1.33340	1.33453	1.33546	1.3303#	1.33731	1.33823	1.33416	1.33934	1.3395?	1.33971
18.0	1.33345	1.31437	1.43524	1.33621	1.33713	1.33005	1.33847	1.33916	1.33434	1.33952
20.0 22.0	1.33321	1.33414	1.33411	1.33603	1.33694	1.33786	1.33877	1.33846	1.33414	1.33932 1.33911
24.0	1.33289	1.33300	1.31-71	1.33502				1.33857	1.33071	1.33869
20.0						1-33/43	1.31834			
20.0	1.33266	1.33359	1.39449	1.33540	1-33653	1.33743	1.33834	1.33830	1.3 3048	1.33066
	1.33246	1.33359	1.33449						1.33048	1.33043
30.0	1.33246		1.33427	1.33540	1.33631 1.336CH	1.33771	1.33012	1.33830		
₹0•0	1.33246	1.33334	1.33427	1.33540	1.33631 1.336CH	1.33771	1.33012	1.33830	1.33624	1.33043
<b>0.</b> ñ	1.33246 1.33273 34.0 1.34095	1.3333A 1.33313 35.0 1.34115	1.33427 1.33403 34.0 1.34135	1.33540 1.33517 1.33494 37.0 1.34155	1.33631 1.336CH 1.337H4 3H.C	1.33721 1.33698 1.33674 29.6 1.34144	1.33812 1.33788 1.34764 40.0	1.33830 1.33800 1.33702 41.0 1.34233	1.33624 1.33601 42.0 1.34253	1.33643 1.33619 43.0 1.34273
0•0 2•0	1.33246 1.33273 34.0 1.34095 1.34088	1.3334 1.3313 35.0 1.34115 1.34108	1.33427 1.33403 34.0 1.34135 1.34138	1.33540 1.33517 1.33494 37.0 1.34155 1.34167	1.33031 1.330CH 1.337M4 3H.C 1.30174 1.30174	1.33721 1.33698 1.33676 29.6 1.34196	1.33812 1.33788 1.34764 40.0 1.34214 1.34206	1.33830 1.33800 1.33782 41.0 1.34233 1.34225	1.33024 1.33001 47.0 1.34243 1.34244	1.33643 1.33619 43.0 1.34273 1.34264
0.0 2.0 4.0	1.33246 1.33273 94.0 1.34095 1.34084 1.34079	1.3334 1.3313 35.0 1.34115 1.34108 1.34094	1.33427 1.33403 36.0 1.34135 1.34138 1.34138	1.33540 1.33517 1.33696 37.0 1.34155 1.34167	1.33031 1.330CH 1.337HA 3H.C 1.30174 1.34107	1.33721 1.33690 1.33674 29.6 1.34144 1.34140	1.33812 1.33788 1.35764 40.0 1.34214 1.34206 1.34196	1.33830 1.33800 1.33782 41.0 1.34233 1.34225 1.34215	1.33026 1.33001 	1.33643 1.33619 +3.0 1.36273 1.36264 1.36279
0.0 2.0 4.0 4.0	1.33246 1.33273 34.0 1.34095 1.34088 1.34079	1.3334 1.3313 15.0 1.34115 1.34108 1.34049 1.34088	1.33427 1.33403 34.0 1.34135 1.34138 1.34107	1.33540 1.33517 1.33594 37.0 1.34155 1.36167 1.36138	1.33031 1.3306m 1.330m 2M.C 1.30170 1.30107 1.30107	1.33721 1.33699 1.33674 29.60 1.34144 1.34180 1.34177 1.14167	1.33788 1.33788 1.34704 40.0 1.34214 1.34206 1.34184	1.33830 1.33800 1.33782 41.0 1.34233 1.34225 1.34215	1.33026 1.33001 	1.33643 1.33619 43.0 1.36273 1.36264 1.36264
0.eñ 2.e0 4.e0 4.eñ 8.en	1.33246 1.33273 34.0 1.34095 1.34080 1.34079 1.34080 1.34080	1.3333A 1.3313 35.0 1.34115 1.34094 1.34088 1.34075	1.33-27 1.33-03 34.0 1.34135 1.34138 1.3418 1.34107	1.33540 1.33517 1.33494 37.0 1.34155 1.34167 1.34181 1.34184	1.316Cm 1.337m4 3H.C 1.3017n 1.30177 1.30167 1.34157 1.34157	1.33771 1.33690 1.33674 29.6 1.34194 1.34194 1.34177 1.14184	1.33788 1.33788 1.33784 40.0 1.34214 1.34206 1.34196 1.34184	1.33830 1.33800 1.33782 41.0 1.34233 1.34225 1.34217 1.34201 1.34201	1.33026 1.33001 	1.33643 1.33619 *3.00 1.34273 1.34264 1.34274 1.34247 1.34247
0.0 2.0 4.0 4.0	1.33246 1.33273 34.0 1.34095 1.34088 1.34079	1.3334 1.3313 15.0 1.34115 1.34108 1.34049 1.34088	1.33427 1.33403 34.0 1.34135 1.34138 1.34107	1.33540 1.33517 1.33594 37.0 1.34155 1.36167 1.36138	1.33031 1.3306m 1.330m 2M.C 1.30170 1.30107 1.30107	1.33721 1.33699 1.33674 29.60 1.34144 1.34180 1.34177 1.14167	1.33788 1.33788 1.34704 40.0 1.34214 1.34206 1.34184	1.33830 1.33800 1.33782 41.0 1.34233 1.34225 1.34215	1.33026 1.33001 	1.33643 1.33619 43.0 1.36273 1.36264 1.36264
0.00 2.00 4.00 4.00 8.00 10.00 12.00 14.00	1.33246 1.33223 34.0° 1.34095 1.34084 1.34074 1.34084 1.34084 1.34084 1.34084	1-3333A 1-33213 35-0 1-34115 1-34108 1-34098 1-34075 1-34061 1-4644 1-3627	1.33427 1.33403 34.0 1.34128 1.34128 1.34107 1.3404 1.3404 1.3404 1.3404 1.3404	1.33540 1.33517 1.33404 37.0 1.34155 1.34167 1.34176 1.34176 1.34176 1.44116 1.46087 1.46087 1.46087	1.33631 1.336Cm 1.335m4 38.0C 1.34174 1.34177 1.34171 1.34184 1.34181 1.34181 1.34181 1.34181	1.33771 1.33698 1.33674 29.6 1.34194 1.34171 1.14164 1.34170 1.34190 1.34170 1.34170	1.33812 1.33788 1.34704 40.0 1.34214 1.34204 1.34164 1.34164 1.34164 1.34164 1.34164 1.34164 1.34164 1.34164	1.33830 1.33806 1.33782 41.0 1.34233 1.34225 1.34216 1.34176 1.34176 1.34176 1.34176	1.33026 1.33001 	1.33643 1.33619 43.0 1.36273 1.36264 1.36274 1.36267 1.36267 1.36261 1.36212 1.36195 1.36195
0.0 2.0 4.0 4.0 4.0 10.0 12.0 14.0 14.0	1. 33246 1. 33223 34.0 1. 34095 1. 34084 1. 34074 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084	1-3333A 1-3323 35-0 1-3415 1-34108 1-34088 1-34075 1-34061 1-34061 1-34061 1-34061	1.33427 1.33403 34.0 1.34128 1.34128 1.34104 1.3404 1.3404 1.3404 1.3404 1.3404 1.3404	1.33540 1.33517 1.335494 37.0 1.34125 1.34126 1.34126 1.44116 1.4082 1.4082 1.4082 1.4082	1.33631 1.336Cm 1.337m4 3N.C 1.34174 1.34167 1.34165 1.34161 1.34161 1.346Cm 1.346Cm	1.33771 1.33698 1.33674 29.6 1.34194 1.34177 1.14164 1.34177 1.34190 1.34102 1.34102 1.34102 1.34102	1.33788 1.33788 1.34704 40.0 1.34214 1.54206 1.34196 1.34196 1.34197 1.54197 1.54197 1.54121	1.33830 1.33800 1.33800 1.33782 41.0 1.3423 1.34225 1.34217 1.34174 1.34174 1.34174 1.34134 1.34134	1.33024 1.33001 	1.33643 1.33619 63.0 1.36273 1.36264 1.36274 1.36247 1.36247 1.36247 1.36247 1.36212 1.36176
0.00 2.00 4.00 4.00 6.00 10.00 12.00 14.00 14.00 14.00	1. 33246 1. 33223 34.0 1. 34095 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 35971 1. 35971	1-33350 1-3323 35-0 1-34115 1-34109 1-34099 1-34091 1-34071 1-34071 1-34071 1-34071 1-34071	1.33427 1.33403 34.0 1.34125 1.34126 1.34107 1.34014 1.3404 1.3404 1.3404 1.3404 1.3407 1.34007	1-335-0 1-33-0 1-33-0 37-0 1-341-5 1-341-6 1-341-6 1-341-6 1-340-6 1-441-6 1-340-6 1-40-0 1-340-6	1-33931 1-33966 1-33966 1-33966 1-34157 1-34157 1-34166 1-34161 1-34663 1-34664	1.33771 1.33490 1.33674 29.6 1.34197 1.34197 1.14185 1.34197 1.34190 1.34190 1.34102 1.34102	1.33788 1.33788 1.33784 40.0 1.3424 1.34208 1.34188 1.34188 1.34188 1.34188 1.34188 1.34181 1.34121 1.34121	1.33830 1.3380a 1.3370c 41.0 1.34233 1.34225 1.34215 1.3417 1.3417 1.3417 1.3417 1.3410 1.3410	1.33026 1.33001	1.33643 1.33619 43.0 1.36273 1.36264 1.36267 1.36267 1.36267 1.36267 1.36212 1.36176 1.36176 1.36177
0.00 2.00 4.00 5.00 8.00 10.00 14.00 16.00 16.00 26.00 26.00	1. 33246 1. 33223 34.0 1. 34049 1. 34054 1. 34054 1. 34054 1. 34054 1. 34054 1. 35941 1. 35941 1. 35941	1.3339n 1.33213 15.00 1.34100 1.34000 1.34000 1.34001 1.44641 1.34001 1.34001 1.34001 1.34001 1.33900	1.33427 1.33403 36.0 1.34123 1.34128 1.34104 1.34004 1.34004 1.34004 1.34007 1.34007 1.34007	1.33540 1.33517 1.33694 37-0 1.34135 1.34136 1.34136 1.34136 1.3406 1.46116 1.3406 1.3406 1.3406 1.3406 1.3406	1.33631 1.33674 1.33744 38-C 1.34177 1.34187 1.34181 1.34181 1.34181 1.34181 1.34084 1.34084 1.34084	1.33771 1.33698 1.33674 29.6 1.34194 1.34197 1.34190 1.34197 1.34190 1.34197 1.34190 1.34197 1.34081	1.33788 1.33788 1.34704 40.0 1.34204 1.34104 1.34104 1.34104 1.34104 1.34104 1.34104 1.34104 1.34104 1.34104 1.34004 1.34004	1.33830 1.3380e 1.33782 41.0 1.3423 1.34225 1.34216 1.34176 1.34176 1.34176 1.34176 1.34176 1.34176 1.34176 1.34176	1.33626 1.33601 4/-0 1.34243 1.34244 1.3424 1.3417 1.3417 1.34157 1.34134 1.34114 1.34114	1.33843 1.33819 -53.0 1.34.273 1.34.294 1.34.274 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247 1.34.247
0.00 2.00 4.00 4.00 6.00 10.00 12.00 14.00 14.00 14.00	1. 33246 1. 33223 34.0 1. 34095 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 34084 1. 35971 1. 35971	1-33350 1-3323 35-0 1-34115 1-34109 1-34099 1-34091 1-34071 1-34071 1-34071 1-34071 1-34071	1.33427 1.33403 34.0 1.34125 1.34126 1.34107 1.34014 1.3404 1.3404 1.3404 1.3404 1.3407 1.34007	1-335-0 1-33-0 1-33-0 37-0 1-341-5 1-341-6 1-341-6 1-341-6 1-340-6 1-441-6 1-340-6 1-40-0 1-340-6	1-33931 1-33966 1-33966 1-33966 1-34157 1-34157 1-34166 1-34161 1-34663 1-34664	1.33721 1.33698 1.33674 29.6 1.34194 1.34177 1.14164 1.34194 1.34194 1.34194 1.34194 1.3408 1.3408 1.3408 1.3408 1.3408 1.3408	1.33788 1.33788 1.33784 40.0 1.3424 1.34208 1.34188 1.34188 1.34188 1.34188 1.34188 1.34181 1.34121 1.34121	1.33830 1.3380a 1.3370c 41.0 1.34233 1.34225 1.34215 1.3417 1.3417 1.3417 1.3417 1.3410 1.3410	1.33026 1.33001	1.33643 1.33619 43.0 1.36273 1.36264 1.36267 1.36267 1.36267 1.36267 1.36212 1.36176 1.36176 1.36177
0.00 2.00 4.00 4.00 6.00 10.00 12.00 14.00 14.00 14.00 27.00 27.00	1. 33246 1. 33223 34.0 1. 34095 1. 34084 1. 34054 1. 34054 1. 34054 1. 34054 1. 34054 1. 35941 1. 35944 1. 3594	1.3339n 1.39213 15.00 1.34115 1.34108 1.34075 1.34071 1.44041 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071 1.34071	1.33427 1.33403 36.0 1.34135 1.34128 1.34104 1.34104 1.34043 1.34044 1.34043 1.34004 1.34004 1.33407 1.33404 1.33404 1.33404 1.33404 1.33404 1.33404 1.33404 1.33404 1.33404	1.33540 1.3357 1.33694 37-0 1.34135 1.34137 1.34137 1.34137 1.3404 1.4042 1.3604 1.3604 1.3604 1.3702 1.3704 1.3704 1.3704 1.3704 1.3704	1.31951 1.33966 1.33966 1.33966 1.34197 1.34197 1.34193 1.34101 1.34101 1.3400	1.33721 1.33698 1.33674 29-0 1.34144 1.34177 1.14164 1.34177 1.4164 1.34177 1.34164 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406 1.3406	1.33788 1.33788 1.34704 40.0 1.34214 1.34206 1.34194 1.34194 1.34194 1.34121 1.34121 1.3404 1.34034 1.34034 1.34034	1.33830 1.3380a 1.3370z 41.0 1.34233 1.34225 1.34215 1.3417 1.3417 1.3417 1.3417 1.3410 1.3410 1.3400 1.3400 1.3400	1.33626 1.33611 	1.33643 1.33619 43.0 1.36273 1.36264 1.36274 1.36267 1.36267 1.36212 1.36176 1.36176 1.36176 1.36176 1.36176 1.36176 1.36176 1.36176 1.36176 1.36176 1.36077

Table A-1. (cont)

					<b>(%)</b>					
THE					1y	<i>.</i>				λ = 000 nm
oc.	1 0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.Ö <sup> </sup>
0.0	1,33363	1.33461	1.33559	1-33458	1.33756	1.33053	1.33951	1.33972	1.33991	1.34012
210 410	1.33361	1.33458	1.33555	1.33653	1.33751	1.33048	1.33945	1.33965	1.33764	1.34004
4.0	1.33352	1.33440	1.33544	1.33440	1.33735	1.33631	1.33926	1.33744	1.37766	1.33905
8.0° 10.4	1.33345	1.33440	1.33534	1:33431	1.33725	1.33021	1.33916	1.33935	1.33954	1.33973 1.33959
12.0	1.33326	1.33419	1.33513	1.33467	1.33700	1.33793	1.33087	1.33905	1.33924	1.33943
1440	1.33313	1.33404	1.33448	1.33592	1.33684	1.33777	1.33069	1.33000	1.33907	1.33925
16.0	1.33300	1.33391	1.37403	1.33575	1.33667	1.33759	1.33051	1.33869	1.33069	1.33906 1.33887
20.0	1.33267	1.33350	1.33449	1.33540	1.33631	1.33721	1.33013	1.33631	1.33049	1.33067
22.0	1.33249	1.33339	1.33430	1.33520	1.33610	1.33701	1.33792	1.33010	1.33028	1.33846
24.0 76.0	1.33229	1.33319	1.33469	1.33499	1.33509	1.33679	1.33770	1.33700	1.33004	1:33024 1:33001
28.0	1.33105	1.33275	1.33365	1.33454	1.33544	1.33434	1.33724	1.33742	1.33760	1.33778
30.0	1.33163	1.33252	1.33342	1.33431	1.33521	1.33610	1.33700	1.33710	1.33736	1.33754
	34.0	35.0	36.0	37.0	38.0	39.0	46.0	41.0	42.0	43.0
0.0	1.34030	1.34051	1.34079	1.34090	1.34109	1.34129	1.34148	1.34169	1.34188	1.34207
2.0	1.34023	1.34043	1.34062	1.34082	1.34101	1.34121	1.34140	1:34160	1.34179	1.34199
4.0 6.0	1.34015 1.34004	1.34034	1.34042	1.34062	1.34092	1.34100	1.34120	1.34150	1.34169	1.34189 1.34177
8.0	1.33993	1.34012	1.34030	1.34049	1.34066	1.34087	1.34107	1.34126	1-34145	1.34163
10.0	1.33978	1.33997	1.34014	1.34035	1.34053	1.34073	1.34091	1.34210	1.34129	1.34148
12.0 14.0	1.33941	1.33960	1.33999	1.34017	1.34036	1.34055	1.34074	1.34093	1.34111	1.34130 1.34111
14.0	1.33925	1.33943	1.33941	1.33900	1.33998	1.34017	1.34035	1.34054	1.34072	1.34091
18.0	1.33905	1.33924	1.33942	1.33940	1.33979	1.33997	1.34015	1.34034	1.34052	1.34070
2 <b>0.</b> 0 22.0	1.33883 1.33864	1.33404	1.33922	1.33940	1.33956	1.33977	1.33995	1.34013	1,34031	1.34050
24.0	1.33542	1.33040	1.33878	1.33896	1.33914	1,33932	1.33950	1.33549	1.33987	1.34005
26.0	1.33819	1.33#37	1.33855	1-33873	1.33891	1.33909	1.33927	1.33944	1.33964	1.33901
28.0 30.0	1.33750	1.33914	1.33#32	1.33850	1.33848	1.33866	1.33904	1.33922	1.33940	1.33954 1.33933
				-	(1)					λ = <b>620 nm</b>
TEMP	<b></b>	5.0	10.0		INTY (0)		30.0	31.0	37.0	
TEMP	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0 <b>.</b> 0	1.33306	1.33404	1 - 33501	15.0 1.33400	20.0 1.33698	25.0 1.33795	1.33893	1.33914	1.33932	33.0
0.0 2.0	1.33304 1.33304	1.33404	1.3501 1.33498	15.0 1.33600 1.335 <del>9</del> 5	20.0 1.33698 1.33693	25.0 1.33795 1.33789	1.33893	1.33914	1.33932	33.0 1.33953 1.33946
0 <b>.</b> 0	1.33306	1.33404	1 - 33501	15.0 1.33400	20.0 20.0 1.33698 1.33693 1.33685 1.33677	25.0 1.33795	1.33893	1.33914	1.33932	33.0
0.0 2.0 4.0 6.0 8.0	1.33304 1.33304 1.33300 1.33295 1.3328H	1.33404 1.33401 1.33396 1.33390 1.33383	1.33501 1.33498 1.33492 1.33446 1.33477	15.0 1.33600 1.33595 1.33589 1.33581 1.33572	20.0 20.0 1.33698 1.33693 1.33665 1.33667	25.0 1.33795 1.33789 1.33782 1.33772 1.33762	1.33893 1.33887 1.33879 1.33869 1.33856	1.33914 1.33904 1.33898 1.33888	1.33932 1.33926 1.33918 1.33967 1.33695	33.0 1.33953 1.33946 1.33936 1.23926 1.33914
0.0 2.0 4.0 6.0 8.0 10.0	1.33304 1.33304 1.33300 1.33295 1.3328H 1.33279	1.33404 1.33401 1.33396 1.33340 1.33373	1.33501 1.33498 1.33492 1.33486 1.33477	15.0 1.33600 1.33595 1.33589 1.33581 1.33572 1.33561	20.0 1.33698 1.33693 1.33695 1.33667 1.33667	25.0 1.33795 1.33789 1.33782 1.33772 1.33762 1.33750	1.33893 1.33687 1.33679 1.33869 1.33856	1.33914 1.33906 1.33898 1.33876 1.33863	1.33932 1.33926 1.33918 1.33967 1.33695 1.33681	33.0 1.33953 1.33946 1.33936 1.33926 1.33914 1.33910
0.0 2.0 4.0 6.0 8.0	1.33304 1.33304 1.33300 1.33295 1.3328H	1.33404 1.33401 1.33396 1.33390 1.33383	1.33501 1.33498 1.33492 1.33446 1.33477	15.0 1.33600 1.33595 1.33589 1.33581 1.33572	20.0 1.33698 1.33693 1.33685 1.33685 1.33667 1.33656 1.23642 1.33626	25.0 1.33795 1.33789 1.33782 1.33772 1.33750 1.33735 1.33719	1.33493 1.33687 1.33679 1.33656 1.33656 1.33644 1.33628	1.33914 1.33906 1.33898 1.33876 1.33863 1.33847 1.33829	1.33932 1.33926 1.33918 1.33907 1.33697 1.33665 1.33665	33.0 1.33953 1.33946 1.33936 1.33926 1.33926 1.33900 1.33684 1.33687
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0	1.33306 1.33300 1.33300 1.33295 1.33288 1.33279 1.33265 1.33257	1.33404 1.33401 1.33396 1.33390 1.33373 1.333742 1.33349 1.33334	1-3501 1-33498 1-33492 1-33446 1-33477 1-33455 1-33441 1-33-20	15.0 1.33600 1.33589 1.33581 1.33561 1.33561 1.33561 1.33534 1.33534	20.0 1.33698 1.33698 1.33693 1.33657 1.33677 1.3367 1.3367 1.3367 1.3367	25.0 1.33795 1.33782 1.33772 1.33752 1.33750 1.33735 1.33719	1.33493 1.33687 1.33679 1.33656 1.33656 1.33644 1.33628 1.33611 1.33793	1.33914 1.33906 1.33898 1.33886 1.33863 1.33863 1.33867 1.33829	1.33932 1.33926 1.33918 1.33907 1.33665 1.33665 1.33648 1.33630	33.0 1.33953 1.33954 1.33956 1.33926 1.33926 1.33900 1.33884 1.33867 1.33867
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0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0	1.33306 1.33300 1.33300 1.33295 1.33288 1.33279 1.33265 1.33257	1.33404 1.33401 1.33396 1.33393 1.33393 1.333942 1.33394 1.33314 1.33311 1.33311 1.33301 1.33202	1-3501 1-33498 1-33492 1-33446 1-33477 1-33455 1-33441 1-33-20	15.0 1.33600 1.33589 1.33581 1.33561 1.33561 1.33561 1.33534 1.33534	20.0 20.0 1.33498 1.33493 1.33457 1.33467 1.33466 1.23442 1.33426 1.33420 1.33592 1.33573 1.33573	25.0 1.337e5 1.337e7 1.337e2 1.337e2 1.33750 1.33735 1.33719 1.33603 1.33643	1.33493 1.33679 1.33669 1.33668 1.33668 1.33628 1.33611 1.33793 1.33775 1.33775	1.33914 1.33906 1.33808 1.33808 1.33808 1.33803 1.33807 1.33807 1.33811 1.33773 1.33773	1.33932 1.33926 1.33918 1.33907 1.33695 1.33645 1.33648 1.33630 1.33611 1.33791	33.0 1.33953 1.33956 1.33956 1.33926 1.33926 1.33940 1.33667 1.33668 1.3367 1.3367
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0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 14.0 17.0 27.0 27.0 27.0	1.33306 1.33404 1.33300 1.33279 1.33284 1.33277 1.33263 1.33277 1.33263 1.33271 1.33171 1.33172	1.33484 1.33491 1.33396 1.33373 1.33373 1.33349 1.33349 1.33318 1.33301 1.33202 1.33702 1.33702	1. J3501 1. 33498 1. 33492 1. 33467 1. 33467 1. 33467 1. 33461 1. 33461 1. 33461 1. 33392 1. 33372 1. 33330 1. 33307	15.0 1.33400 1.33595 1.33589 1.33581 1.33591 1.33591 1.33594 1.33594 1.33594 1.33462 1.33462 1.33462 1.33462	20.0 1.33698 1.33693 1.33693 1.33697 1.33667 1.33666 1.23642 1.33626 1.33626 1.33626 1.33591 1.33593 1.33593 1.33591 1.33596	25.0 1.33795 1.33789 1.33772 1.33772 1.33750 1.33750 1.33719 1.33719 1.33643 1.33643 1.33643 1.33651 1.33599	1.33493 1.33467 1.33467 1.33468 1.33468 1.33461 1.33793 1.337793 1.337793 1.33793 1.33793 1.33793 1.33793	1.33914 1.33904 1.33698 1.33693 1.33674 1.33673 1.33673 1.33673 1.33773 1.33773 1.33773 1.33773 1.33730 1.33707	1.33932 1.33926 1.33918 1.33907 1.33695 1.33648 1.33648 1.33648 1.33648 1.33791 1.33791 1.33791 1.33791 1.33792	33.0 1.33953 1.33946 1.33936 1.33926 1.33926 1.33864 1.33867 1.33868 1.33869 1.33869 1.33869 1.33766 1.33766 1.33766
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0.0 2.0 4.0 6.0 10.0 12.0 14.0 14.0 14.0 14.0 20.0 27.0 12.0 28.0 28.0 28.0 28.0 28.0 28.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	1.33306 1.33209 1.33239 1.33237 1.33257 1.33257 1.33221 1.33211 1.33172 1.33172 1.33173 1.33173 1.33174 1.33174 1.33175 1.33176 1.33455 1.33455 1.33455 1.33455 1.33455 1.33455 1.33456 1.33457 1.33457 1.33467 1.33467	1.33404 1.33401 1.33390 1.33393 1.33394 1.33394 1.33318 1.33318 1.33318 1.33201 1.33201 1.33201 1.33201 1.33201 1.33201 1.33201 1.33201 1.33903 1.33903 1.33903 1.33903 1.33903 1.33903 1.33903 1.33903 1.33903 1.33903	1. J3501 1. 33498 1. 33496 1. 33496 1. 33461 1. 33455 1. 33461 1. 33392 1. 33372 1. 33372 1. 33397 1. 33284 34.0 1. 34011 1. 34004 1. 33993 1. 33893 1. 33883 1. 33883 1. 33883	15.0 1.33400 1.33595 1.33591 1.33591 1.33549 1.33549 1.33540 1.33542 1.33462 1.33462 1.33462 1.33476 1.33376 1.33376 1.33376	20.0  1.33698 1.33698 1.33698 1.33698 1.33696	25.0  1.33795 1.33789 1.33782 1.33772 1.33762 1.33730 1.33730 1.33633 1.33643 1.33643 1.33657 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33673 1.33476 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478 1.33478	1.33897 1.33869 1.33869 1.33864 1.33868 1.33868 1.33811 1.33774 1.33774 1.33774 1.33772 1.33712 1.33689 1.33642 40.0 1.34089 1.34072 1.34082 1.34072 1.34082 1.34072 1.34082 1.34072 1.34089 1.34072 1.34089 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974	1.33914 1.33906 1.33898 1.33898 1.33893 1.33847 1.33813 1.33772 1.33772 1.33773 1.33773 1.33730 1.33404 1.34101 1.34101 1.34101 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.33995 1.33995 1.33997 1.33991 1.33991 1.33991 1.33991	1.33932 1.33926 1.33918 1.33905 1.33905 1.33865 1.33848 1.33941 1.33791 1.33791 1.33791 1.33791 1.33791 1.33791 1.3412	33.0  1.33953 1.33954 1.33954 1.33954 1.33956 1.33967 1.33968 1.33867 1.33968 1.3367 1.33968 1.33764 1.33766 1.33769 1.33769 1.33769 1.33761 1.33719 1.33695

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Table A-1. (cont)

					(m)					λ = 640 nm
TEMP				BAI	MITT (0)	( <del>**</del> )				
°c	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0 2.0	1.33251 1.33250	1.33349	1.33447	1.33545	1.33643	1.33741	1.33840	1.33859	1.33079	1.33896 1.33891
4.0	1.33246	1.33343	1.33439	1.33535	1.33631	1.33728	1.33824	1.33843	1.33863	1.33082
6.0	1.33241	1-33336	1.33432	1.33527	1.33622	1. 3718	1.33814	1.33833	1.33852	1.33671
8.0	1.33234 1.33225	1.33328	1.33423	1.3351#	1.33612	1.33707	1.33802	1.33821	1.33840	1.33859 1.33845
10.0 12.0	1.33215	1.33308	1.33401	1.33494	1.33587	1.33660	1.33773	1.33792	1.33610	1.33829
14.0	1.33203	1.33295	1.30387	1.33480	1.33572	1.33664	1.33757	1.33775	1.33794	1.33812
14.0	1.33189	1.33260	1.33372	1.33464	1.33556	1.33647	1.33739	1.33757	1.33776	1.33794 1.33775
18.0 20.0	1.33173	1.33264	1.33355	1.33428	1.33519	1.33609	1.33700	1.33718	1.33734	1.33754
22.0	1.33138	1.33228	1.33318	1.33408	1.33499	1.33589	1.33679	1.33697	1.33715	1.33733
24.0	1.33118	1.33208	1.33298	1.33388	1.33477	1.33567	1.33657	1.33675	1.33693	1.33711
26.0 2 <b>8.0</b>	1.33097	1.33187	1.33276	1.33366	1.33455	1.33545	1.33635	1.33652	1.33670	1.33689 1.33665
30.0	1.33052	1.33141	1.33230	1.33319	1.33408	1.33498	1.33587	1.33405	1.33623	1.33640
	34.0	35.0	36.0	37.0	36.0	39.0	40.0	41.0	42.0	43.0
0.0	1.33918	1.33937	1.33957	1.33976	1.339%	1.34016	1.34034	1.34055	1.34075	1.34094
2.0 4.0	1.33910 1.33901	1.33930	1.33949	1.33969	1.33988	1.34007	1.34027	1.34046	1.34066	1.34085
6.0	1.33890	1.33 09	1.33928	1.33947	1.33766	1.33766	1.34005	1.34024	1.34043	1.34062
8.0	1.33677	1.33896	1.33415	1.33934	1.33953	1.33972	1.33991	34010	1.34029	1.34048
10-0	1.33863	1.33882	1.33901	1.33920	1.33938	1.33957	1.33976	1.33995	1.34014	1.34032
12.0 14.0	1.33848	1.33866	1.33485	1.33903 1.33886	1.33922	1.33741	1.33959	1.33940	1.33996	1.34015 1.33997
16.0	1.33812	1.33831	1.33849	1.33867	1.33886	1.33904	1.33922	1.33941	1.33959	1.33577
18.0	1.33793	1.33811	1.33829	1.33848	1.33866	1.33884	1.33902	1.33921	1.33939	1.33957
₹5•U 50•0	1.33773	1.33791	1.33809	1.33627	1.33845	1.33863	1.33882	1.33900	1.33918	1.33936
24.0	1.33729	1.33747	1.33765	1.33783	1.33801	1.33819	1.33837	1.33855	1.33673	1.33891
26.0	1.33706	1.33724	1.33742	1.33760	1.33778	1.33796	1.33814	1.33832	1.33850	1.33868
28.6 30.0	1.33683	1.33700	1.33718	1.33736	1.33754	1.33772	1.33790	1.33808	1.33826	1.33843
TPMD				SALI	(A)					λ = <b>66</b> 0 nm
TEMP CC	0.0	5.0	10.0	<b>SAL</b> I 15.0	(B) (MLTY (9/ <sub>0</sub> 20.0	25.0	30.0	31.0	32.0	λ = <b>660 nm</b>
°C				15.0	20.0	25.0				33.0
0.0 2.0	1.33201	1.33298 1.33296	1.33396	15.0 1.33494 1.33490	MITY (0/ <sub>0</sub> 20.0 1.33592 1.33587	25.0 1.33690 1.33684	1.33; 5	1.33807	1.33827 1.33820	33.0 1.33846 1.33839
0.0 2.0 4.0	1.33201 1.33199 1.33195	1.33298 1.33296 1.33291	1.33396 1.33393 1.33367	15.0 1.33494 1.33490 1.33484	20.0 20.0 1.33592 1.33587 1.33580	25.0 1.33690 1.33684 1.33676	1.33% 5 1.33701 1.33772	1.33807 1.33800 1.33791	1.33827 1.33820 1.33811	33.0 1.33846 1.33839 1.33830
0.0 2.0 4.0 6.0	1.33201 1.33199 1.33195 1.33190	1.33298 1.33296 1.33291 1.33285	1.33396 1.33393 1.33387 1.33380	15.0 1.33494 1.33490 1.33484 1.33476	20.0 1.33592 1.33567 1.33580 1.33571	25.0 1.33690 1.33684 1.33676 1.33666	1.33% 3 1.33781 1.33772 1.33762	1.33807 1.33600 1.33791 1.33781	1.33827 1.33820 1.53811 1.33800	33.0 1.33846 1.33839
0°C 2.0 4.0 6.0 8.0	1.33201 1.33199 1.33195 1.33190 33183	1.33298 1.33296 1.33291 1.33285 1.33277 1.33268	1.33396 1.33393 1.33387 1.33386 1.33372 1.35361	15.0 1.33494 1.33490 1.33484 1.33476 1.33466	20.0 1.33592 1.33587 1.33587 1.33581 1.33561 1.33549	25.0 1.33690 1.33684 1.33676 1.33666 1.33655	1.33% 3 1.33701 1.33772 1.33762 1.33759 1.23736	1.33807 1.33800 1.33791 1.33781 1.33769 1.33755	1.33827 1.33820 1.33811 1.33800 1.33788 1.33774	33.0 1.33846 1.33839 1.33830 1.33819 1.33806 1.33792
0.0 2.0 4.0 6.0 8.0 10.0	1.33201 1.33199 1.33195 3.3190 33183 1.2174 1.33164	1.33298 1.33296 1.33291 1.33285 1.33277 1.33268 1.33257	1.33396 1.33393 1.33387 1.33386 1.33372 1.35361 1.33350	15.0 1.33494 1.33490 1.33484 1.33466 1.33465 1.33465	20.0 1.33572 1.33587 1.33580 1.33571 1.33541 1.33549 1.33535	25.0 1.33690 1.33684 1.33676 1.33666 1.33655 1.33642	1.33; 3 1.33781 1.33772 1.33762 1.33759 1.23736	1.33807 1.33600 1.33791 1.33761 1.33769 1.33755	1.33627 1.33420 1.33611 1.33600 1.33788 1.33774	33.0 1.33846 1.33839 1.33830 1.33819 1.33806 1.33792 1.33777
0°C 2.0 4.0 6.0 8.0	1.33201 1.33199 1.33195 1.33190 33183	1.33298 1.33296 1.33291 1.33285 1.33277 1.33268	1.33396 1.33393 1.33387 1.33386 1.333361 1.33336	15.0 1.33494 1.33490 1.33484 1.33476 1.33466	20.0 1.33592 1.33587 1.33587 1.33581 1.33561 1.33549	25.0 1.33690 1.33684 1.33676 1.33666 1.33655	1.33% 3 1.33701 1.33772 1.33762 1.33759 1.23736	1.33807 1.33600 1.33791 1.33781 1.33755 1.33740 1.33740	1.33827 1.33820 1.33811 1.33800 1.33788 1.33774	33.0 1.33846 1.33839 1.33830 1.33819 1.33806 1.33792
C.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 18.0	1.33201 1.33199 1.33195 1.33195 1.33183 2.5174 1.33154 1.33152 1.33138	1.33298 1.33296 1.33291 1.33285 1.3327 1.33268 1.33257 1.33244 1.33229	1.33396 1.33387 1.33386 1.33372 1.33361 1.33356 1.33356 1.33356	15.0 1.33494 1.33490 1.33484 1.33466 1.33465 1.33442 1.33442 1.33413	20.0 1.33592 1.33587 1.33580 1.3351 1.33549 1.33535 1.33521 1.33504	25.0 1.33690 1.33684 1.33655 1.33655 1.33622 1.33613 1.33590 1.33577	1.33; 3 1.33781 1.33772 1.33762 1.33750 1.23736 1.33721 1.33705 1.33067	1.33807 1.33600 1.33791 1.33781 1.33769 1.33740 1.33740 1.33726 1.3378687	1-33827 1-39420 1-3811 1-33800 1-33788 1-33774 1-33754 1-33724 1-33724	33.0 1.33846 1.33839 1.33830 1.33819 1.33806 1.33777 1.33760 1.33742 1.33772
7.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33138 1.33122 1.33138	1.33298 1.33296 1.33291 1.33205 1.33277 1.33268 1.33257 1.33249 1.33713 1.33713	1.33396 1.33393 1.33387 1.33386 1.33372 1.35361 1.33356 1.33336 1.33321 1.33321	15.0 1.33494 1.33490 1.33484 1.33476 1.33465 1.33422 1.33422 1.33412 1.33395 1.33397	1.33592 1.33597 1.33597 1.33591 1.33591 1.33591 1.33593 1.33593 1.33594 1.33487	25.0 1.33690 1.33684 1.33676 1.33660 1.33652 1.33628 1.33613 1.33598 1.33577	1.33% 3 1.337%1 1.33772 1.33762 1.33765 1.33765 1.33765 1.33668 1.33668	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33740 1.33706 1.33687 1.33686	1.33827 1.33810 1.73811 1.33800 1.33788 1.33774 1.33754 1.33724 1.33725	33-0  1-33846 1-33839 1-33830 1-33819 1-33806 1-33777 1-33760 1-33742 1-33773 1-33703
7.0 2.0 4.0 6.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0	1.33201 1.33199 1.33190 1.33190 1.33190 1.33163 1.33152 1.33152 1.33138 1.33122 1.33105	1.33298 1.33291 1.33291 1.33285 1.33277 1.33268 1.33257 1.33264 1.33229 1.33713 1.33196 1.33177	1.33396 1.33387 1.33387 1.33386 1.33372 1.33346 1.33336 1.3336 1.33306 1.33266	15-0 1.33494 1.33490 1.33484 1.33476 1.33465 1.33428 1.33428 1.333428 1.33391 1.33397 1.33357	20.0 1.33592 1.33580 1.33581 1.33561 1.33549 1.33549 1.33504 1.33504 1.3347	25.0 1.33690 1.33684 1.33676 1.33666 1.33675 1.33628 1.33628 1.33578 1.33577 1.33558 1.33558	1.33; 9 1.33781 1.33772 1.33762 1.33759 1.33731 1.33705 1.33648 1.33648 1.33648	1.33807 1.33600 1.33791 1.33781 1.33769 1.33740 1.33740 1.33726 1.3378687	1-33827 1-39420 1-3811 1-33800 1-33788 1-33774 1-33754 1-33724 1-33724	33-0  1-33846 1-33830 1-33830 1-33819 1-33806 1-33777 1-33760 1-33772 1-33773 1-33703 1-33703
C.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 27.0 27.0 24.0	1.33201 1.33199 1.33199 1.33190 133183 1.33164 1.33152 1.33138 1.33122 1.33105 1.33087 1.33087	1.33298 1.33291 1.33291 1.33285 1.33265 1.33268 1.33268 1.33269 1.33229 1.33713 1.33176 1.33177	1.33396 1.33387 1.33386 1.33378 1.33350 1.33350 1.33350 1.33304 1.33266 1.33267 1.33247	15.0 1.33494 1.33490 1.33494 1.33476 1.33452 1.33452 1.33452 1.33395 1.33397 1.33393 1.33393 1.33393	20.0 1.33592 1.33587 1.33580 1.3351 1.3351 1.33549 1.33521 1.33504 1.33407 1.33467 1.33467 1.33467 1.33467	25.0 1.33490 1.33684 1.33676 1.33660 1.33628 1.33628 1.33513 1.33596 1.33558 1.33558 1.33518 1.33518 1.33518 1.33518 1.33518 1.33518	1.33: 9 1.33781 1.33762 1.33762 1.33736 1.33736 1.33705 1.33668 1.33648 1.33648 1.33648 1.33648	1.33807 1.33600 1.33791 1.33791 1.3379 1.33790 1.33790 1.33706 1.33687 1.33666 1.33662 1.33624	1.33827 1.33810 1.33810 1.33788 1.33774 1.33758 1.33724 1.33724 1.33725 1.33685 1.33662 1.33662	33-0  1-33846 1-33839 1-33839 1-33819 1-33806 1-33777 1-33760 1-33773 1-33763 1-33681 1-33681 1-33687
C.0 2.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0	1.33201 1.33199 1.33199 1.33190 33183 1.3174 1.33164 1.33152 1.33138 1.33122 1.33087 1.33087 1.33067 1.33067	1.33298 1.33290 1.33291 1.33205 1.33268 1.33257 1.33229 1.33217 1.33177 1.33177	1.33396 1.33387 1.33387 1.33561 1.33356 1.33356 1.3321 1.33246 1.33246 1.33247 1.33247 1.33225	15-0 1.33494 1.33494 1.33494 1.33496 1.33465 1.33462 1.33462 1.33371 1.33377 1.33375 1.33375 1.33375	20.0 1.33592 1.33580 1.33581 1.33561 1.33561 1.33569 1.33569 1.33504 1.33604 1.33467 1.33467 1.33467 1.33467 1.33467 1.33467 1.33467	25.0 1.33690 1.33684 1.33676 1.33663 1.33653 1.33596 1.33576 1.33576 1.33576 1.33470	1.33; 3 1.33781 1.33762 1.33762 1.33750 1.33751 1.33705 1.33687 1.33688 1.33688 1.33688 1.33688 1.33688 1.33688 1.33688 1.33688	1.33807 1.33791 1.33791 1.33769 1.33769 1.33769 1.33766 1.33667 1.33666 1.33665 1.33662 1.33657	1.33827 1.33810 1.53811 1.33708 1.33774 1.33774 1.33724 1.33724 1.3365 1.33665 1.33662 1.33662	33-0  1-33846 1-33830 1-33830 1-33801 1-33806 1-33777 1-33760 1-33742 1-33773 1-33703 1-33681 1-33659 1-33637 1-33613
C.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 27.0 27.0 24.0	1.33201 1.33199 1.33199 1.33190 33183 1.3174 1.33164 1.33152 1.33138 1.33122 1.33087 1.33087 1.33067 1.33067	1.33298 1.33291 1.33291 1.33285 1.33265 1.33268 1.33268 1.33269 1.33229 1.33713 1.33176 1.33177	1.33396 1.33387 1.33387 1.33561 1.33356 1.33356 1.3321 1.33246 1.33246 1.33247 1.33247 1.33225	15-0 1.33494 1.33494 1.33494 1.33496 1.33465 1.33462 1.33462 1.33371 1.33377 1.33375 1.33375 1.33375	20.0 1.33592 1.33580 1.33581 1.33561 1.33561 1.33569 1.33569 1.33504 1.33604 1.33467 1.33467 1.33467 1.33467 1.33467 1.33467 1.33467	25.0 1.33490 1.33684 1.33676 1.33660 1.33628 1.33628 1.33513 1.33596 1.33558 1.33558 1.33518 1.33518 1.33518 1.33518 1.33518 1.33518	1.33: 9 1.33781 1.33762 1.33762 1.33736 1.33736 1.33705 1.33668 1.33648 1.33648 1.33648 1.33648	1.33807 1.33600 1.33791 1.33791 1.3379 1.33790 1.33790 1.33706 1.33687 1.33666 1.33662 1.33624	1.33827 1.33810 1.53811 1.33708 1.33774 1.33774 1.33724 1.33724 1.3365 1.33665 1.33662 1.33662	33-0  1-33846 1-33839 1-33839 1-33819 1-33806 1-33777 1-33760 1-33773 1-33763 1-33681 1-33681 1-33687
C.0 2.0 4.0 6.0 8.0 10.0 14.0 18.0 27.0 24.0 24.0 24.0 30.0	1.33201 1.33199 1.33199 1.33190 33183 1.33152 1.33152 1.33188 1.33122 1.33105 1.33087 1.33087 1.33087 1.33087	1.33298 1.33291 1.33291 1.33285 1.3327 1.33268 1.33229 1.33129 1.33173 1.33176 1.33176 1.33176 1.33176	1.33396 1.33397 1.33387 1.33586 1.33372 1.35361 1.33333 1.33321 1.33247 1.33247 1.33247 1.33247 1.33277	15.0 1.33494 1.33494 1.33494 1.33495 1.33462 1.33462 1.33413 1.33377 1.33397 1.33391 1.33292 1.33221	20.0 1.33592 1.33587 1.33580 1.33511 1.33549 1.33551 1.33549 1.33521 1.33504 1.33404 1.33467 1.33404 1.33404 1.33371 1.33357	25.0 1.33690 1.33684 1.33676 1.33650 1.33652 1.33612 1.33590 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577 1.33577	1.33; 3 1.337e1 1.33772 1.33772 1.33761 1.33761 1.33705 1.33648 1.33648 1.33648 1.33648 1.33659 1.33583	1.33807 1.33800 1.33791 1.33769 1.33769 1.33769 1.33766 1.33866 1.33666 1.33666 1.33677 1.33577	1.33827 1.33810 1.53811 1.33708 1.33778 1.33774 1.33724 1.33724 1.33085 1.33683 1.33683 1.33683 1.33683 1.33671	33.0 1.33846 1.33839 1.33830 1.33819 1.33806 1.33777 1.33777 1.33777 1.33772 1.33773 1.33773 1.33703 1.33657 1.33657 1.33637 1.33613 1.33588
C.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 30.0	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33138 1.33122 1.33105 1.33087 1.33087 1.33087 1.33086	1.33298 1.33296 1.33297 1.33205 1.33277 1.33264 1.33257 1.33257 1.33213 1.33116 1.33117 1.33116 1.33116 1.33116 1.33815	1.333% 1.3334% 1.3334% 1.33372 1.3334% 1.33350 1.333304 1.33207 1.33207 1.33207 1.33207 1.33207 1.33207	15.0 1.33494 1.33494 1.33496 1.33465 1.33462 1.33462 1.33463 1.33377 1.33395 1.33395 1.33396 1.33315 1.33292 1.33292	20.0 1.33592 1.33580 1.33581 1.33561 1.33549 1.33549 1.33504 1.33504 1.33406 1.3347 1.3347 1.3347 1.3347 1.3347 1.3349 1.3359	25.0 1.33490 1.33684 1.33676 1.33666 1.33662 1.33628 1.33590 1.33590 1.33591 1.33591 1.33591 1.33490 1.33490	1.33; 3 1.33781 1.33772 1.33762 1.33765 1.33705 1.33705 1.33067 1.33668 1.33667 1.33668 1.33667 1.33569 1.33559 1.33559 1.33559	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33760 1.33760 1.33667 1.33665 1.33667 1.33677 1.33577	1.33827 1.33410 1.53811 1.33800 1.33788 1.33758 1.33758 1.33758 1.33765 1.33663 1.33663 1.33662 1.33659 1.33595 1.33595 1.33595	33-0  1-33846 1-33839 1-33839 1-33819 1-33806 1-33777 1-33760 1-33773 1-33763 1-33681 1-33659 1-33637 1-336613 1-33688
C.0 2.0 4.0 6.0 8.0 10.0 14.0 14.0 20.0 24.0 24.0 24.0 30.0	1.33201 1.33199 1.33199 1.33190 33183 1.3174 1.33164 1.33152 1.33181 1.33047 1.33047 1.33047 1.33047 1.33047 1.33047 1.33047	1.33298 1.33290 1.33295 1.33227 1.33265 1.33257 1.33264 1.33257 1.33213 1.33196 1.33173 1.33174 1.33090 35.0 1.33845 1.33845 1.33845	1.33396 1.33397 1.33387 1.33387 1.33396 1.33336 1.33336 1.33326 1.33247 1.33247 1.33227 1.33247 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327	15-0 1.33494 1.33490 1.33494 1.33496 1.33495 1.33492 1.33395 1.33397 1.33396 1.33292 1.33291	20.0 1.33592 1.33580 1.33581 1.33581 1.33594 1.33591 1.33594 1.33594 1.33467 1.33467 1.3347 1.3347 1.3347 1.3347 1.3359 1.33594 1.33594 1.33594 1.33594	25.0 1.33490 1.33684 1.33675 1.33660 1.33628 1.33628 1.33510 1.33596 1.33510 1.33510 1.33494 1.33470 1.33446 39.0 1.33964 1.33964 1.33965	1.33; 3 1.33781 1.33772 1.33762 1.33750 1.33731 1.33705 1.33648 1.33648 1.33648 1.33659 1.33559 1.33559	1.33807 1.33800 1.33791 1.33781 1.33769 1.33760 1.33760 1.33667 1.33666 1.33666 1.33661 1.33577 1.33553	1.33 #27 1.33 #20 1.53 #11 1.33 #00 1.33 778 1.33 774 1.33 774 1.33 774 1.33 764 1.33 865 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.33 864 1.34 864 1.3	33-0  1-33846 1-33839 1-33830 1-33819 1-33806 1-33777 1-33760 1-33772 1-33763 1-33763 1-33659 1-33659 1-33659 1-33659 1-33659 1-3368 43-0 1-34042 1-34033
C.0 2.0 4.0 6.0 8.0 12.0 14.0 18.0 20.0 22.0 24.0 24.0 30.0	1.33201 1.33199 1.33190 3.3183 7.5174 1.33164 1.33152 1.33132 1.33105 1.33047 1.33047 1.33047 1.33047 1.33046 1.33656 1.33656 1.33656 1.33656	1.33298 1.33290 1.33295 1.33277 1.33265 1.33277 1.33264 1.33257 1.33271 1.33196 1.33114 1.33090 35.0 1.33845 1.33845 1.33868 1.338678 1.33868	1.33396 1.33397 1.33397 1.33398 1.33397 1.33396 1.33396 1.33296 1.33297 1.33247 1.33247 1.33247 1.33279 1.33297 1.33297 1.33898	15-0 1.33494 1.33496 1.33484 1.33476 1.33465 1.33452 1.33329 1.33395 1.33395 1.33397 1.33397 1.33397 1.33397 1.33397 1.33397 1.33397 1.33397 1.33397 1.33397	20.0 1.33592 1.33580 1.33581 1.33561 1.33549 1.33549 1.33504 1.33504 1.33504 1.33407 1.3347 1.3347 1.3347 1.3347 1.3347 1.3349 1.33936 1.33936 1.33936 1.33926 1.33926	25.0 1.33490 1.33684 1.33675 1.33666 1.33662 1.33628 1.33590 1.33590 1.33597 1.33591 1.33591 1.33490 1.33470 1.33490 1.33950 1.33965 1.33965 1.33993	1.33; 3 1.33781 1.33772 1.33762 1.33763 1.33765 1.33765 1.33648 1.33648 1.33648 1.33657 1.33606 1.33559 1.33559 1.33559	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33740 1.33740 1.33666 1.33667 1.33667 1.33677 1.33553	1.33 #27 1.33 #20 1.53 #11 1.33 #00 1.33 778 1.33 774 1.33 774 1.33 774 1.33 774 1.33 774 1.33 774 1.33 774 1.33 774 1.33 965 1.33 965 1.33 967 1.33 967 1.33 967 1.34 97 1.34	33-0  1-33846 1-33839 1-33830 1-33819 1-33806 1-33777 1-33760 1-33772 1-33762 1-33773 1-33681 1-3369 1-3369 1-3369 1-3369 1-34042 1-34033 1-34022 1-34033 1-34022 1-34010
C.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33185 1.33047 1.33047 1.33066 1.33866 1.33866 1.33869 1.33869 1.33888	1.33298 1.33290 1.33297 1.33285 1.33277 1.33264 1.33257 1.33257 1.33291 1.33196 1.33177 1.33196 1.33114 1.33090 1.33857 1.33845 1.33857 1.33845	1.33396 1.33397 1.33387 1.33387 1.33390 1.33336 1.33336 1.33247 1.33247 1.33247 1.33247 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3337 1.3337 1.3383	15-0 1.33494 1.33490 1.33494 1.33496 1.33495 1.33492 1.33395 1.33397 1.33395 1.33292 1.33201 1.33907 1.33907 1.33907	20.0  1.33592 1.33580 1.33581 1.33591 1.33591 1.33591 1.33594 1.33467 1.33467 1.33467 1.33467 1.33490 1.3391 1.3391	25.0 1.33490 1.33684 1.33675 1.33662 1.33628 1.33628 1.33517 1.33577 1.33577 1.33516 1.33474 1.33474 1.33474 1.33476 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964 1.33964	1.33; 3 1.33781 1.33782 1.33772 1.33763 1.33750 1.23736 1.33648 1.33648 1.33657 1.33559 1.33559 1.33559 1.33559 1.33535	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33760 1.33667 1.33666 1.33666 1.33661 1.33677 1.33577 1.33573 41.0	1.33 #27 1.33 #10 1.53 #11 1.33 708 1.33 778 1.33 775 1.33 775 1.33 764 1.33 3642 1.33 3642 1.33 3642 1.33 595 1.34 14 1.34 16 1.34 16	33.0 1.33846 1.33839 1.33830 1.33819 1.33819 1.33877 1.33772 1.33777 1.33773 1.33723 1.33723 1.33723 1.33681 1.33681 1.33687 1.33687 1.33687 1.33687 1.33687 1.34613 1.34622 1.34610 1.34622 1.34610 1.34610 1.34995
C.0 2.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 24.0 26.0 26.0 26.0	1.33201 1.33199 1.33199 1.33190 1.33164 1.33152 1.33138 1.33122 1.33107 1.33047 1.33047 1.33047 1.33046 1.33856 1.33856 1.33856 1.33858 1.33858 1.33859 1.33858	1.33298 1.33291 1.33291 1.33268 1.3327 1.33268 1.3327 1.3327 1.3329 1.3317 1.3317 1.3317 1.3316 1.3316 1.3316 1.3368 1.3368 1.3368 1.3368 1.3368 1.3368 1.3368	1.33396 1.33397 1.33387 1.33396 1.33396 1.33396 1.33396 1.33246 1.33246 1.33247 1.33247 1.33247 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.3327 1.33879 1.33849	15-0 1.33494 1.33494 1.33496 1.33496 1.33465 1.33462 1.33462 1.33297 1.33397 1.33397 1.33397 1.33397 1.33399 1.33399 1.33491 1.33917	20.0  1.33592 1.33580 1.33512 1.33549 1.33551 1.33552 1.33552 1.33564 1.33467 1.33467 1.33467 1.33464 1.33381 1.333976 1.33936 1.33936 1.33926 1.33916 1.33916	25.0 1.33490 1.33684 1.33676 1.33662 1.33696 1.33596 1.33597 1.33597 1.33597 1.33596 1.33470 1.33470 1.33470 1.33964 1.33964 1.33964 1.33953 1.33995 1.33993 1.33993	1.33; 3 1.33781 1.33772 1.33772 1.33770 1.33736 1.33705 1.33648 1.33648 1.33648 1.33659 1.33559 1.33559 1.33559 1.33975 1.33975 1.33975 1.33975	1.33807 1.33791 1.33769 1.33769 1.33769 1.33760 1.33760 1.33665 1.33665 1.33665 1.33665 1.33677 1.33577 1.33573 41.0	1.33827 1.33810 1.53811 1.33708 1.33774 1.33774 1.33724 1.33724 1.33763 1.3365 1.33663 1.33663 1.33663 1.33671 42.0 1.34022 1.34014 1.34023 1.33971 1.33971	33-0  1-33846 1-33830 1-33819 1-33806 1-33777 1-33760 1-33772 1-33773 1-33763 1-33763 1-33681 1-33688
7.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	1.33201 1.33199 1.33199 1.33190 33183 1.3174 1.33152 1.33138 1.33175 1.33087 1.33087 1.33087 1.33856 1.33858 1.33818 1.33818 1.33818 1.33818 1.33818	1.33298 1.33290 1.33295 1.33227 1.33264 1.33257 1.33264 1.33257 1.33196 1.33177 1.3157 1.33156 1.33114 1.33090 35.0 1.33845 1.33845 1.33845 1.33845 1.33846 1.3385 1.33846 1.3385	1.33396 1.33397 1.33387 1.33387 1.33396 1.33336 1.33336 1.33286 1.33286 1.33287 1.33287 1.33287 1.33287 1.33287 1.33287 1.33287 1.33287 1.33287 1.33287 1.33893 1.33893 1.33893 1.33893 1.33884 1.33883 1.33884 1.33883 1.33883	15-0 1.33494 1.33494 1.33494 1.33494 1.33495 1.33462 1.33462 1.33462 1.33397 1.33397 1.33392 1.33221 37.0 1.33924 1.33921 1.33921 1.33921 1.33921 1.33921 1.33921 1.33921	20.0  1.33592 1.33580 1.33581 1.33561 1.33561 1.33561 1.33561 1.33564 1.33467 1.33467 1.33467 1.33467 1.33467 1.33468 1.33916 1.33916 1.33916 1.33916 1.33916 1.33810 1.33916 1.33810 1.33810 1.33810 1.33810 1.33810 1.33810	25.0 1.33690 1.33684 1.33676 1.33662 1.33622 1.33590 1.33590 1.33577 1.33590 1.33597 1.33590 1.33494 1.33494 1.33933 1.33952	1.33; 3 1.33781 1.33782 1.33772 1.33763 1.33763 1.33763 1.33668 1.33648 1.33659 1.33559 1.33559 1.33559 1.33593 40.033983 1.33952 1.33952 1.33952 1.33952	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33760 1.33866 1.33667 1.33866 1.33677 1.33867 1.33877 1.33877 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974 1.33974	1.33 #27 1.33 #20 1.53 #11 1.33 708 1.33 778 1.33 774 1.33 754 1.33 764 1.33 664 1.33 664 1.33 664 1.33 667 1.34 022 1.34 014 1.34 003 1.34 003 1.3	33.0 1.33846 1.33839 1.33830 1.33819 1.33819 1.33806 1.33777 1.33760 1.33772 1.33773 1.33773 1.33703 1.33651 1.33657 1.33637
C.0 2.0 4.0 6.0 8.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 26.0 30.0	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33138 1.33172 1.33087 1.33087 1.33087 1.330866 1.33858 1.33858 1.33858 1.33878 1.33878 1.33878 1.33786	1.33298 1.33290 1.33297 1.33265 1.33277 1.33264 1.33257 1.33213 1.33116 1.33117 1.33116 1.33116 1.33816 1.33878 1.33878 1.33878 1.33868 1.338779	1.33396 1.33397 1.33396 1.33372 1.33396 1.33396 1.33297 1.33297 1.33297 1.33297 1.33297 1.33297 1.33898	15-0 1.33494 1.33496 1.33486 1.33465 1.33462 1.33463 1.33377 1.33397 1.33397 1.33397 1.33399 1.33292 1.33491 1.33917 1.33917 1.33917 1.33917 1.33917 1.33917	20.0  1.33592 1.33580 1.33511 1.33549 1.33551 1.335521 1.33564 1.33467 1.33467 1.33467 1.33467 1.33496 1.333916 1.33926 1.33926 1.33916	25.0 1.33490 1.33684 1.33676 1.33662 1.33628 1.33596 1.33596 1.33597 1.33597 1.33596 1.33470 1.33470 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33940 1.33869 1.33869 1.33869 1.33869	1.33; 3 1.33781 1.33772 1.33762 1.33763 1.33765 1.33668 1.33648 1.33648 1.33659 1.33559 1.33559 1.33559 1.33535	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33760 1.33665 1.33665 1.33665 1.33667 1.33677 1.33573 41.0 3.3974 1.33974 1.33971 1.33974 1.33971 1.33972 1.33972 1.33972	1.33 #27 1.33 #20 1.53 #11 1.33 788 1.33 778 1.33 758 1.33 758 1.33 758 1.33 758 1.33 758 1.33 758 1.33 863 1.33 864 1.34 863 1.34 8	33-0  1-33846 1-33839 1-33839 1-33839 1-33801 1-33777 1-33770 1-33772 1-33773 1-33773 1-33773 1-33613 1-33659 1-33637 1-33613 1-33681 1-33659 1-34070 1-34032 1-34030 1-34032 1-34030 1-33995 1-33980 1-33980 1-33980 1-33980
0.0 2.0 4.0 6.0 8.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33188 1.333122 1.33187 1.33067 1.33067 1.33067 1.33067 1.33067 1.33075 1.33011 1.33836 1.33846 1.33847 1.33876 1.33776 1.33776 1.33776	1.33298 1.33290 1.33297 1.33285 1.33277 1.33264 1.33273 1.33273 1.33273 1.33173 1.33174 1.33174 1.33174 1.33174 1.33174 1.33865 1.3386 1.3	1.33396 1.33397 1.33347 1.33347 1.33347 1.33347 1.33390 1.33326 1.33247 1.33227 1.33227 1.33247 1.33247 1.33279 1.33179	15-0 1.33494 1.33496 1.33476 1.33466 1.33452 1.33452 1.33271 1.33397 1.33357 1.33357 1.33397 1.33397 1.33397 1.33397 1.33397 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997	20.0  1.33592 1.33580 1.33581 1.33561 1.33561 1.33561 1.33564 1.33467 1.33467 1.33467 1.3347 1.3347 1.3347 1.3347 1.33916 1.33816	25.0 1.33490 1.33684 1.33655 1.33655 1.33652 1.33653 1.33577 1.33576 1.33577 1.33536 1.33577 1.33536 1.33577 1.33537 1.33570 1.33490 1.33960	1.33; 3 1.33781 1.33782 1.33772 1.33763 1.33750 1.33661 1.33661 1.33661 1.33667 1.33666 1.33559 1.33559 1.33559 1.33559 1.33559 1.33559 1.33559 1.33559	1.33807 1.33781 1.33781 1.33781 1.33769 1.33760 1.33760 1.33660 1.33666 1.33666 1.33667 1.33666 1.33677 1.33553 41.0 1.34577 1.335740 1.34974 1.33974 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978	1.33827 1.33820 1.53811 1.33788 1.33774 1.33754 1.33754 1.33765 1.33665 1.33662 1.33661 1.33662 1.33671 42.0 1.34022 1.34014 1.34003 1.33944 1.33944 1.33941 1.33941 1.33941 1.33941 1.33941 1.33941	33-0  1-33846 1-33839 1-33830 1-33819 1-33806 1-33792 1-33777 1-33760 1-33772 1-33763 1-33637 1-33980
C.0 2.0 4.0 8.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33138 1.33122 1.33105 1.33047 1.33047 1.33047 1.33846 1.33856 1.33856 1.33856 1.33876 1.33876 1.33766 1.33766 1.33766 1.33766 1.33766	1.33298 1.33290 1.33295 1.33227 1.33264 1.33229 1.33196 1.33177 1.3156 1.33114 1.33090 35.0 1.33845 1.33845 1.33845 1.33878 1.33866 1.33877 1.33779 1.33779 1.33779 1.33779	1.33396 1.33397 1.33397 1.33396 1.33396 1.33396 1.33396 1.33396 1.33296 1.33296 1.33297 1.33297 1.33297 1.33297 1.33179 36.0 1.33905 1.339797 1.33893 1.33893 1.33897 1.33897 1.33897 1.33797 1.33797	15-0 1.33494 1.33496 1.33486 1.33465 1.33465 1.33462 1.33375 1.33397 1.33397 1.33391 1.33292 1.33292 1.33291 1.33907 1.33705	20.0  1.33592 1.33580 1.33581 1.33581 1.33581 1.33581 1.33581 1.33581 1.33581 1.33581 1.33404 1.33404 1.33404 1.33404 1.33404 1.33404 1.33381 1.33357	25.0 1.33690 1.33684 1.33673 1.33662 1.33628 1.33590 1.33597 1.33597 1.33597 1.33597 1.33597 1.33590 1.33945 1.33945 1.33995	1.33; 3 1.33781 1.33781 1.33772 1.33762 1.33737 1.33681 1.33881	1.33807 1.33800 1.33791 1.33769 1.33769 1.33760 1.33760 1.33666 1.33666 1.33667 1.33696 1.33677 1.33577 1.33577 1.33577 1.33577 1.33578 41.0	1.33827 1.33810 1.53811 1.33708 1.33778 1.33754 1.33754 1.33754 1.33642 1.33642 1.33643 1.33642 1.34014 1.34003 1.33944 1.34014 1.34003 1.33944 1.34014 1.34003 1.33946 1.33946 1.33946 1.33947 1.33946 1.33946 1.33946 1.33946 1.33946 1.33946 1.33946 1.33966 1.33966 1.33966	33-0  1-33846 1-33839 1-33830 1-33819 1-33806 1-33777 1-33760 1-33772 1-33773 1-33773 1-33773 1-33783 1-33681 1-33681 1-33687 1-33681 1-33687 1-34010 1-34042 1-34033 1-34033 1-34010 1-33995 1-33980 1-33995 1-33980
C.0 2.0 4.0 6.0 8.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 25.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	1.33201 1.33199 1.33199 1.33190 33183 1.33164 1.33152 1.33188 1.333122 1.33067 1.33067 1.33067 1.33068 1.33846 1.33846 1.33847 1.33701 1.33701 1.33701 1.33701 1.33701 1.33701 1.33701 1.33701 1.33701	1.33298 1.33290 1.33291 1.33297 1.33265 1.33277 1.33264 1.33257 1.33269 1.33713 1.33196 1.33114 1.33090 35.0 1.33857 1.33864 1.33864 1.33877 1.33864 1.33877 1.33779 1.33779 1.33779 1.33779 1.33779 1.33779 1.33779	1.33396 1.33397 1.33397 1.33396 1.33396 1.33396 1.33396 1.33247 1.33247 1.33227 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33247 1.33797 1.33797 1.33778 1.33778 1.33778 1.33778 1.33778	15-0 1.33494 1.33494 1.33494 1.33494 1.33495 1.33492 1.33491 1.33397 1.33391 1.33292 1.33261 37.0 1.33917 1.33907 1.33907 1.33917 1.33907 1.33917 1.33907 1.33917 1.33907 1.33917 1.33907 1.33917 1.33907 1.33917 1.33731	20.0  1.33592 1.33580 1.33581 1.33594 1.33591 1.33594 1.33594 1.33467 1.33467 1.33467 1.33467 1.3347 1.3347 1.3347 1.3347 1.33772 1.33773	25.0 1.33490 1.33664 1.33655 1.33656 1.33658 1.33658 1.33577 1.33576 1.33577 1.33576 1.33577 1.33576 1.33470 1.33470 1.33470 1.33965 1.33767	1.33; 3 1.33781 1.33782 1.33772 1.33763 1.33750 1.33648 1.33648 1.33648 1.33657 1.33656 1.33559	1.33807 1.33761 1.337741 1.33769 1.33769 1.33760 1.33760 1.33667 1.33666 1.33667 1.33667 1.33677 1.33553 41.0 3.4003 3.33974 1.33974 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978 1.33978	1.33827 1.33820 1.53811 1.33788 1.33778 1.33758 1.33758 1.33759 1.3365 1.33662 1.33662 1.33661 1.33662 1.33661	33-0  1-33846 1-33839 1-33819 1-33819 1-33819 1-33877 1-33777 1-33777 1-33777 1-33773 1-33773 1-33703 1-33681 1-33681 1-33687 1-33613 1-33687 1-33613 1-33681 1-33687 1-33613 1-33687 1-33613 1-33687 1-33613 1-33687 1-33613 1-33688 1-336881 1-338881 1-338884 1-338881 1-338881 1-338881 1-338881 1-338881 1-338881 1-338881
0.0 2.0 4.0 6.0 8.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 26.0 30.0	1.33201 1.33199 1.33199 1.33190 33183 1.33152 1.33183 1.33152 1.33105 1.33087 1.33087 1.33087 1.33087 1.330866 1.33858 1.33858 1.338780 1.338780 1.33780 1.33780 1.33780 1.33780 1.33780 1.33780	1.33298 1.33290 1.33297 1.33297 1.33297 1.33264 1.33273 1.33196 1.33173 1.33196 1.33116 1.33196 1.33173 1.33846 1.33887 1.33887 1.33884	1.33396 1.33397 1.33397 1.33396 1.33396 1.33396 1.33396 1.33396 1.33296 1.33296 1.33297 1.33297 1.33297 1.33297 1.33179 36.0 1.33905 1.339797 1.33893 1.33893 1.33897 1.33897 1.33897 1.33797 1.33797	15-0 1.33494 1.33496 1.33486 1.33465 1.33465 1.33463 1.33395 1.33395 1.33396 1.33397 1.33399 1.33292 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997 1.33997	20.0  1.33592 1.33597 1.33580 1.33591 1.33561 1.33561 1.33564 1.33467 1.33467 1.33467 1.3347 1.3347 1.3347 1.3347 1.3347 1.33916 1.33737	25.0 1.33490 1.33684 1.33666 1.33662 1.33662 1.33613 1.33590 1.33577 1.33590 1.33577 1.33590 1.33470 1.33470 1.33470 1.33950	1.33; 3 1.33781 1.33782 1.33762 1.33760 1.33763 1.33648 1.33648 1.33627 1.33606 1.33583 1.33570 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952 1.33952	1.33807 1.33791 1.33791 1.33749 1.33740 1.33740 1.33740 1.33740 1.33666 1.33667 1.33668 1.33677 1.33553 41.0 3.4003 3.3994 1.33971 1.33974 1.33974 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976	1.33827 1.33420 1.53811 1.33788 1.33778 1.33754 1.33754 1.33765 1.33665 1.33665 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33662 1.33666 1.33662 1.33666	33-0  1-33846 1-33839 1-33839 1-33839 1-33801 1-33777 1-33760 1-33772 1-33773 1-33773 1-33703 1-33681 1-33659 1-33659 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33681 1-33659 1-33661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-3661 1-

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Table A-1. (cont)

***	,				(é)					λ = <b>600</b> nm
TEMP	0.0	Š.0	10.0	EAI	20.0	<del>س)</del>	30.0	31.0	32.0	33.0
0.0	1.33153	1.33250	1.33348	1.33446	1.33543	1.33641	1.33739	1.337>6	1.33778	1.33797
2.0	1.33152	1.33246	1.33345	1.33442	1.33539	1.33636	1.33732	1.33752	1.33771	1.33790
4.0 6.0	1.33146	1.33244	1.33340	1.33434	1.33532	1.33628	1.33724	1.33743	1.33762	1.33702
4.0	1.33134	1.33230	1.33325	1.33419	1.33513	1.33608	1.33702	1.33721	1.33740	1.3377i 1.33759
10.0	1.33127	1.33221	1.33314	1.33408	1.33501	1.33595	1.33448	1.3370/	1.33724	1.33745
12.0 14.0	1.33117	1.33210	1.33302	1.33395	1.33486	1.33581	1.33473	1.33692	1.33711	1.33729 1.33712
16.0	1.33091	1.33182	1.33274	1.33745	1.33454	1.33547	1.33439	1.33657	1.33675	1.33694
18.0	1.33075	1.33166	1.33257	1.33348	1.33438	1.33529	1.33620	1.33638	1.33454	1.33674
20 <b>.</b> 0	1.33059	1.33149	1.33239	1.33329	1.33419	1.33509	1.33400	1.33618	1.33636	1.33654 1.33633
24.0	1.33021	1.33110	1.33200	1.33289	1.33379	1.33460	1.33558	1.33575	1.33593	1.33611
24.0 28.0	1.33000	1.33090	1.33179	1.33245	1.33357	1.33446	1.33535	1.33553	1.33571	1.33589
30.0	1.32955	1.33044	1.33133	1.33221	1.33310	1.33399	1.33512	1.33530	1.33547	1.33545 1.33540
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.33817	1.33836	1.33856	1.33875		1.33914	1.33934	1.33953	1.33973	1.33992
2.0 4.0	1.33#10 1.33#C1	1.33029 1.33020	1.33548	1.33868	1.33 00 7 1.338 70	1.33907	1.33926	1.33945	1.33965	1.33984
6.0	1.33790	1.33009	1.33824	1.33847	1.33866	1.33445	1.33904	1.33923	1.33942	1.33974
5.0	1.33777	1.33796	1.33715	1.33834	1.33653	1.33872	1.33091	1.33905	1.33928	1.33947
10.0 12.0	1.33763	1.33782	1.33801	1.33819	1.33434	1.33857	1.33875	1.33094	1.33913	1-33932 1-33915
14.0	1.33731	1.33747	1.33/68	1.33786	1.33804	1.33823	1.33841	1.33840	1.33478	1.33896
16.0	1.33712	1.33730	1.33748	1.33767	1.33785	1.33403	1.33021	1.33640	1.33856	1.33876
18.0 20.0	1.33692 1.33672	1.33710	1.33728 1.3370#	1.33747	1.33765	1.33763	1.33001	1.33819	1.33837	1.33055 1.33034
27.0	1.33651	1.33669	1.33687	1.3,705	1.33722	1.33741	1.33758	1.33776	1.33794	1.33012
74.0 76.0	1.33629	1.33647	1.33665	1.33683	1.33701	1.33719	1.33736	1.33754	1.33772	1.33790
24.0	1.33607 1.33583	1.33601	1.33642	1.33660	1.33678	1.33676	1.33714	1.33732	1.33749	1.33767
30.0	1.33558	1.35576	1.33593	1.33611	1.33429	1.33647	1.33664	1.33602	1.33700	1.33710
TEMP	<b>_</b>			SAI	(p) Limity (*)	/ <b>a</b> )		<del></del>		λ = 700 nm
TEMP	0.0	5.0	10.0	<b>SA</b> I		/ <b>a)</b>	36.0	31.0	32.0	λ = <b>700 nm</b>
°C	1.33108	1.33206	1.33303	15.0 1.33401	20.0 1.33448	25.0 1.335^6	1.33693	1.33712	1.33732	33.0 1.33751
0.0 2.0	1.3310A 1.3310A	1.33206	1.33303	15.0 1.33401 1.33398	LIMITY (0. 20.0 1.33498 1.33494	25.0 1.335*6 1.335*1	1.33493	1.33712	1.33732	33.0 1.33751 1.33745
°C	1.33108	1.33206	1.33303	15.0 1.33401	20.0 1.33448	25.0 1.335^6	1.33693	1.33712	1.33732	33.0 1.33751
0.0 7.0 4.0 A.0 8.0	1.3310A 1.3310A 1.33105 1.3310C 1.33093	1.33204 1.33204 1.33201 1.33195 1.33187	1.33303 1.33301 1.33297 1.33290 1.33281	15.0 1.33401 1.33398 1.33385 1.33385	20.0 1.33498 1.33494 1.33488 1.33480 1.33479	25.0 1.335°6 1.33591 1.33584 1.33575 1.33564	1.33493 1.33487 1.33480 1.33470 1.33458	1.33712 1.35707 1.33699 1.33689	1.33732 1.33726 1.33718 1.33708 1.33696	33.0 1.33751 1.33745 1.33737 1.33727 1.33727
0.0 7.0 4.0 6.0 8.0	1.33106 1.33104 1.33105 1.33100 1.33093 1.33084	1.33204 1.33204 1.33201 1.33195 1.33147 1.33178	1.33303 1.33301 1.33297 1.33290 1.33241 1.33271	15.0 1.33401 1.33398 1.33393 1.33385 1.33364	20.0 1.33498 1.33498 1.33498 1.33480 1.33479 1.33479	25.0 1.335 <sup>4</sup> 1.33591 1.33584 1.33564 1.33551	1.33693 1.33687 1.33680 1.33670 1.33658 1.33644	1.33712 1.33707 1.33499 1.33489 1.33677 1.33663	1.33732 1.33726 1.33718 1.33708 1.33696 1.33687	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700
0.0 7.0 4.0 6.0 8.0 10.0 12.0	1.3310A 1.3310A 1.33105 1.33105 1.33093 1.33084 1.33074 1.33061	1.33206 1.33204 1.33201 1.33197 1.33187 1.33178 1.33166 1.33153	1.33303 1.33301 1.33297 1.33290 1.33281 1.33271 1.33729	15.0 1.33401 1.33398 1.33395 1.33376 1.33364 1.33352 1.333337	1.33498 1.33498 1.33498 1.33488 1.33490 1.33479 1.33458 1.33454 1.33429	25.0 1.335°6 1.335°1 1.335°1 1.335°1 1.33551 1.33537 1.33521	1.33693 1.33687 1.33650 1.33658 1.33658 1.33644 1.33629 1.33613	1.33712 1.35707 1.33699 1.33677 1.33643 1.33648	1.33732 1.33726 1.33718 1.33708 1.33696 1.33667 1.33667	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700 1.33665 1.33665
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0	1.3310A 1.3310A 1.3310C 1.3310C 1.33093 1.33084 1.33074 1.33061 1.33047	1.33206 1.33204 1.33201 1.33195 1.33117 1.33178 1.33166 1.33153 1.33138	1.33303 1.33301 1.33297 1.33290 1.33281 1.33271 1.33729 1.33245 1.33229	15.0 1.33401 1.33398 1.33385 1.33376 1.33352 1.33352 1.33337	1.33498 1.33498 1.33498 1.33490 1.33470 1.33470 1.33440 1.33440 1.33441	25.0 1.33574 1.33584 1.33584 1.33564 1.33551 1.33537 1.33521 1.33503	1.33693 1.33687 1.33680 1.33670 1.33658 1.33644 1.33629 1.33613 1.33594	1.33712 1.35707 i.33649 1.33667 1.33643 1.33648 1.33631	1.33732 1.33726 1.33718 1.33708 1.33696 1.33667 1.33667 1.33650	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700 1.33665 1.33668 1.33668
0.0 7.0 4.0 6.0 8.0 10.0 12.0	1.3310A 1.3310A 1.33105 1.33105 1.33093 1.33084 1.33074 1.33061	1.33206 1.33204 1.33201 1.33195 1.33147 1.33136 1.33153 1.33138 1.33138	1.33303 1.33301 1.33297 1.33290 1.33201 1.33271 1.33245 1.33245 1.33229	15.0 1.33401 1.3339 1.33385 1.33376 1.33364 1.33337 1.33337 1.33337	20.0 1.33498 1.33494 1.33488 1.33479 1.33479 1.33458 1.33444 1.33429 1.33393	25.0 1.335^4 1.33541 1.33584 1.33551 1.33551 1.33531 1.33521 1.33531	1.33643 1.33640 1.33640 1.33670 1.33658 1.33644 1.33629 1.33613 1.33674	1.33712 1.33707 1.33649 1.33649 1.33643 1.33643 1.33648 1.33641 1.33612 1.33542	1.33732 1.33726 1.33718 1.33708 1.33696 1.33667 1.33650 1.33650 1.33630 1.33610	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700 1.33665 1.33668 1.33648 1.33648
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 27.0	1.3310A 1.3310A 1.33105 1.33105 1.33084 1.33061 1.33061 1.33061 1.33097	1.33206 1.33201 1.33201 1.33195 1.33187 1.33186 1.33153 1.33138 1.33131 1.33121 1.33105	1.33303 1.33301 1.33297 1.33290 1.33281 1.33279 1.33295 1.33229 1.33213 1.33195	15.0 1.33401 1.3339 1.3339 1.3337 1.33364 1.3333 1.33331 1.33331 1.33303 1.33205	LIBITY (0 20.0 1.33498 1.33494 1.33498 1.33490 1.33479 1.33456 1.33429 1.33393 1.33393 1.33393	25.0 1.335°4 1.33584 1.33584 1.33551 1.33551 1.33551 1.33551 1.33561 1.33464 1.33464	1.33493 1.33487 1.33680 1.33670 1.33648 1.33648 1.33649 1.33594 1.33574 1.33574 1.33554	1.33712 1.34707 1.33649 1.33677 1.33648 1.33648 1.33648 1.33612 1.33612 1.33572 1.33572	1.33732 1.33726 1.33718 1.33708 1.33696 1.33667 1.33650 1.33630 1.33630 1.33590 1.33590	33.0 1.33751 1.33745 1.33745 1.33727 1.33727 1.33750 1.33465 1.33468 1.33468 1.33468 1.33408 1.33408
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 27.0 24.0	1.3310A 1.3310A 1.33105 1.33109 1.33084 1.33064 1.33064 1.33067 1.33067 1.3297 1.3297	1.33206 1.33204 1.33205 1.33197 1.33178 1.33186 1.33138 1.33138 1.33138 1.33138 1.33087 1.33087	1.33303 1.33301 1.33297 1.33290 1.33281 1.33271 1.33295 1.33245 1.33229 1.33196	15.0 1.33401 1.3339 1.3339 1.3337 1.33344 1.33252 1.33303 1.33205 1.33205 1.33205	20.0 1.33448 1.33448 1.33448 1.33480 1.33479 1.33456 1.33454 1.33452 1.33374 1.33375 1.33375	25.0 1.33576 1.33584 1.33578 1.33551 1.33551 1.33551 1.33503 1.33503 1.33444 1.33444 1.33444	1.33643 1.33647 1.33640 1.33670 1.33644 1.33644 1.33613 1.33594 1.33594 1.33594 1.33554 1.33554	1.33712 1.35707 1.33649 1.33649 1.33673 1.33643 1.33612 1.33612 1.33572 1.33572 1.33572	1-33732 1-33726 1-33718 1-33708 1-33496 1-33667 1-33650 1-33630 1-33630 1-33590 1-33548	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700 1.33665 1.33665 1.33668 1.33648 1.33648 1.33688
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 27.0	1.3310A 1.3310A 1.33105 1.33105 1.33084 1.33061 1.33061 1.33061 1.33097	1.33206 1.33201 1.33201 1.33195 1.33187 1.33186 1.33153 1.33138 1.33131 1.33121 1.33105	1.33303 1.33301 1.33297 1.33290 1.33281 1.33279 1.33295 1.33229 1.33213 1.33195	15.0 1.33401 1.3339 1.3339 1.3337 1.33364 1.3333 1.33331 1.33331 1.33303 1.33205	LIMITY (0 20.0 1.33498 1.33498 1.33490 1.33479 1.33479 1.33479 1.33412 1.33391 1.33397 1.33395 1.33395 1.333313	25.0 1.335°4 1.335°4 1.33575 1.3354 1.33551 1.3352 1.3352 1.3353 1.3348 1.3344 1.3344 1.3344 1.3344	1.33493 1.33487 1.33680 1.33670 1.33644 1.33629 1.33613 1.33574 1.33574 1.33574 1.33574 1.33574	1.33712 1.35707 1.35499 1.33649 1.33673 1.33643 1.33631 1.33612 1.33592 1.33592 1.33591 1.33509	1-33732 1-33726 1-33708 1-33708 1-33667 1-33667 1-33650 1-33610 1-33590 1-33598 1-33548 1-33548	33.0 1.33751 1.33745 1.33745 1.33727 1.33727 1.33750 1.33465 1.33468 1.33468 1.33468 1.33408 1.33408
0.0 7.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 17.0 27.0 24.0 26.0	1.3310A 1.3310A 1.33105 1.33105 1.33093 1.33084 1.33067 1.33061 1.33047 1.33097 1.32997 1.32978 1.32978	1.33204 1.33204 1.33201 1.33197 1.33187 1.33180 1.33153 1.33138 1.33120 1.33007 1.33047 1.33044 1.33044	1.33303 1.33301 1.33297 1.33294 1.33271 1.33295 1.33295 1.33215 1.33195 1.33176 1.33176 1.331313	15.0 1.33401 1.33390 1.33385 1.33385 1.33375 1.33325 1.33321 1.33321 1.33225 1.33265 1.33225	LIBITY (0 20.0 1.33498 1.33498 1.33498 1.33490 1.33479 1.33456 1.33449 1.33429 1.33393 1.33393 1.33393 1.33393 1.33393 1.33313	25.0 1.33576 1.33584 1.33578 1.33551 1.33551 1.33551 1.33503 1.33503 1.33444 1.33444 1.33444	1.33493 1.33687 1.33680 1.33670 1.33678 1.33644 1.33629 1.33574 1.33574 1.33574 1.33554 1.33533 1.33593 1.33493	1.33712 1.35707 1.35499 1.33649 1.33643 1.33643 1.33643 1.33643 1.33612 1.33592 1.33572 1.33551 1.33551 1.33501	1-33732 1-33726 1-33718 1-33708 1-33867 1-33667 1-33650 1-33650 1-33550 1-33550 1-33550 1-33550 1-33558	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33700 1.33665 1.33668 1.33648 1.33628 1.33608 1.33567 1.33566
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 15.0 27.0 24.0 24.0 28.0	1.3310n 1.33100 1.33102 1.33103 1.33043 1.33047 1.33061 1.33047 1.33061 1.33047 1.33015 1.32957 1.32957 1.32957 1.32951	1.33204 1.33204 1.33201 1.33197 1.33187 1.33180 1.33153 1.33138 1.33120 1.33007 1.33047 1.33044 1.33044	1.33303 1.33301 1.33297 1.33294 1.33271 1.33295 1.33295 1.33215 1.33195 1.33176 1.33176 1.331313	15.0 1.33401 1.33396 1.33385 1.33386 1.33364 1.33326 1.33303 1.33205 1.33205 1.33205 1.33226 1.33226 1.33226 1.33226 1.33226 1.33226	LIBITY (0 20.0 1.33498 1.33498 1.33498 1.33490 1.33479 1.33456 1.33449 1.33429 1.33393 1.33393 1.33393 1.33393 1.33393 1.33313	25.0 1.335°4 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.336°1 1.3344 1.3344 1.3344 1.3342 1.3343 1.3343 1.3343 1.3343 1.3343 1.3343 1.3343 1.3343 1.3343	1.33493 1.33687 1.33680 1.33670 1.33678 1.33644 1.33629 1.33574 1.33574 1.33574 1.33554 1.33533 1.33593 1.33493	1.33712 1.35707 1.35499 1.33649 1.33643 1.33643 1.33643 1.33643 1.33612 1.33592 1.33572 1.33551 1.33551 1.33501	1-33732 1-33726 1-33718 1-33708 1-33867 1-33667 1-33650 1-33650 1-33590 1-33590 1-33590 1-33590 1-33597 1-33503	33.0 1.33751 1.33745 1.33737 1.33727 1.33715 1.33710 1.33665 1.33668 1.33668 1.33668 1.33608 1.33507 1.33560
0.0 7.0 4.0 6.0 8.0 10.0 12.0 14.0 15.0 27.0 24.0 26.0 28.0 30.0	1.33108 1.33100 1.33100 1.33100 1.33093 1.33061 1.33061 1.33061 1.33061 1.33061 1.32957 1.32957 1.32957 1.32957 1.32957 1.32913	1.33206 1.33204 1.33207 1.33195 1.33186 1.33186 1.33186 1.33186 1.33180 1.33182 1.33107 1.33007 1.33007 1.33007 1.33001	1.33303 1.33201 1.33291 1.33211 1.33275 1.33225 1.33225 1.33122 1.33175 1.33156 1.33156 1.33156 1.33156 1.33156	15.0 1.33401 1.3339 1.33385 1.33376 1.33376 1.33337 1.33325 1.33205 1.33205 1.33205 1.33205 1.33205 1.33205 1.33205 1.33205 1.33205	LIMITY (0 20.0 1.33498 1.33494 1.33490 1.33470 1.33456 1.33444 1.33429 1.33393 1.33393 1.33393 1.33393 1.33393 1.33394 1.33396	29.0  1.335°4 1.339°1 1.33584 1.33551 1.33551 1.33551 1.3352 1.33444 1.33444 1.33444 1.33449 1.3355 39.0 1.3388	1.33493 1.33687 1.33680 1.33640 1.33658 1.33648 1.33649 1.33574 1.33574 1.33554 1.33513 1.33491 1.33443	1.33712 1.35707 1.33409 1.33467 1.33463 1.33648 1.33612 1.33592 1.33592 1.33591 1.33591 1.33501 1.33501 1.33501	1-33732 1-33726 1-33718 1-33708 1-33496 1-33667 1-33650 1-33630 1-33630 1-33590 1-33590 1-33548 1-3354	33.0  1.33751 1.33745 1.33745 1.33727 1.33727 1.33715 1.33700 1.33665 1.33648 1.33648 1.33688 1.33680 1.33557 1.33506 1.33551 1.33545 1.33545 1.33545
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0.0 7.0 4.0 6.0 10.0 12.0 14.0 15.0 27.0 24.0 27.0 24.0 28.0 30.0	1.33108 1.33100 1.33100 1.33093 1.33081 1.33061 1.33061 1.33061 1.33061 1.32978 1.32978 1.32978 1.32978 1.32978 1.32978 1.32973 1.32973 1.32973 1.33761 1.33761 1.33761 1.33761 1.33764 1.33667 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666 1.33666	1.33206 1.33204 1.33207 1.33187 1.33186 1.33153 1.33166 1.33160 1.33167 1.33067 1.33067 1.33067 1.33067 1.33766 1.33766 1.33765 1.33765 1.33762 1.33762 1.33762 1.33762 1.33685 1.33685 1.33685 1.33685 1.33686	1.33303 1.33201 1.33221 1.33211 1.33275 1.33225 1.33223 1.33195 1.33176 1.33136 1.33136 1.33136 1.33136 1.33136 1.33136 1.33136 1.33136 1.33795 1.33793 1.33793 1.33793 1.33793 1.33793 1.33794 1.33793 1.3379	15.0  1.33401 1.33396 1.33385 1.33376 1.33326 1.33320 1.33226 1.333720 1.333770 1.333771 1.333721 1.33701 1.33679	LIMITY (0 20.0  1.33498 1.33498 1.33490 1.33479 1.33456 1.33461 1.33491 1.33393 1.33971 1.33206  1.33842 1.33833 1.33206  1.33876 1.33876 1.33778 1.33778 1.33778 1.33778 1.33778 1.33778 1.33778 1.33778 1.33676 1.33476	29.0  1.335°4 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.335°1 1.336°1 1.3344 1.3344 1.3344 1.3344 1.3344 1.3346 1.33861 1.33861 1.33861 1.33879 1.33871 1.33778	1.33493 1.33687 1.33688 1.33698 1.33698 1.33691 1.33574 1.33574 1.33554 1.33554 1.33491 1.33443 40.0 1.33841 1.33881	1.33712 1.35707 1.33409 1.33409 1.33463 1.33648 1.33612 1.33592 1.33572 1.33572 1.33571 1.33501 1.33501 1.33501 1.33501 1.33501 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401 1.33401	1-33732 1-33726 1-33718 1-33708 1-33690 1-33667 1-33650 1-33650 1-33590 1-33590 1-33597 1-33597 1-33597 1-33597 1-33910 1-33910 1-33910 1-33910 1-33910 1-33910 1-33910 1-33910 1-33740 1-33711 1-33711 1-33711 1-33711 1-33711 1-33711 1-33711 1-33711 1-33711	33.0  1.33751 1.33765 1.33767 1.33727 1.33715 1.33710 1.33710 1.33665 1.33668 1.33668 1.33668 1.3367 1.33500 1.33507 1.33500 1.33545 1.33521 1.3367 1.33939 1.33931 1.33937 1.33937 1.339387 1.33970 1.33970 1.33970 1.33970 1.33970 1.33977 1.33776

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**Table A-2.** INDEX OF REFRACTION OF SEAWATER
Selected Laser Wavelengths — Atmospheric Pressure

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THE REPORT OF THE PROPERTY OF

					<b>(a)</b>			ſ.	leCd]	λ = 441.6 nm
TEMP					LIMITY (	<del>/</del> )		Į.		X - 441.4 mm
°C	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.34081	1.34182	1.34284	1.34386	1.34487	1.34589	1.34691	1.34711	1.34737	1.34752
2.0	1.34079	1.34100	1.34281	1.34382	1.34482	1.34583	1.34484	1.34704	1.34724	1.34744
4.0	1.34074	1.34176	1.34276	1.34375	1.34475	1.34575	1.34675	1.34695	1.34715	1.34735
4.0	1.34070	1.34149	1.34266	1.34367	1.34446	1.34545	1.34664	1.34684	1-34704	1.34724
8.0	1.34063	1.34161	1.34259	1.34357	1.34456	1.34554	1.34652	1.34672	1.34692	1.347:1
10.0	1.34053	1.34151	1.34248	1.34346	1.34443	1.34541	1.34639	1.34658	1.34678	1.34697
12.0	1.34042	1.34138	1.34235	1.34332	1.34429	1.34526	1.34423	1.34442	1.34662	1.34681
14.0	1.34028	1.34125	1.34221	1.34317	1.34414	1.34510	1.34606	1.34626	1.34645	1.34664
16.0	1.34014	1.34109	1.34205	1.34301	1.34397	1.34493	1.34588	1.34608	1.34427	1.34646 1.34627
18.0 20.0	1.3399# 1.339#U	1.34073	1.34188	1.34284	1.34379	1.34475	1.34570	1.34589	1.34588	1.34607
22.0	1.33761	1.34056	1.34151	1.34245	1.34340	1.3443>	1.34529	1.34548	1.34567	1.34586
24.0	1.33941	1.34035	1.34130	1.34224	1.34318	1.34413	1.34507	1.34526	1.34545	1.34544
26.0	1.33920	1.34014	1.34108	1.34202	1.542%	1.34390	1.34484	1.34503	1.34521	1.34540
28.0	1.33697	1.33990	1.34084	1.34178	1.34272	1.34365	1.34459	1.34478	1.34497	1.34516
30.0	1.33672	1.33966	1.34060	1.34153	1.34247	1.34340	1.34434	1.34452	1.34471	1.34490
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34772	1.34793	1.34813	1.34833	1.34854	1.34874	1.34894	1.34914	1.34935	1.34955
2.0	1.34764	1.34784	1.34805	1.34025	1.34845	1.34865	1.34885	1.34905	1.34925	1.34945
4.0	1.34754	1.34775	1.34795	1.34814	1.34834	1.34054	1.34674	1.34894	1.34914	1.34934
4.0	1.34743	1.34763	1.34783	1.34803	1.34823	1.34842	1.34862	1.34802	1.34902	1.34921
8.0	1.34731	1.34750	1.34770	1.34790	1.34809	1.34629	1.34848	1.34868	1.34868	1.34907
10.0	1.34716	1.34734	1.34755	1.34775	1.34795	1.34814	1.34833	1.34853	1.34872	1.34692
12.0 14.0	1.34700	1.34720	1.34739	1.34759	1.34778	1.34797	1.34799	1.34836	1.34855	1.34875 1.34857
16.0	1.34663	1.34684	1.34722	1.34741	1.34742	1.34761	1.34780	1.34799	1.34818	1.34838
18.0	1.34646	1.34665	1.34684	1.34704	1.34722	1.34742	1.34761	1.34780	1.34799	1.34818
20.0	1.34676	1.34645	1.34664	1.34683	1.34702	1.34721	1.34740	1.34759	1.34778	1.34797
22.0	1.34605	1.34624	1.34643	1.34662	1.34081	1.34700	1.34719	1.34738	1.34756	1.34776
24.0	1.34583	1.34601	1.34620	1.34639	1.34658	1.34677	1.34096	1.34715	1.34733	1.34752
26.0	1.34559	1.34578	1.34597	1.34615	1.34634	1.34653	1.34672	1.34691	1.34709	1.34728
28.0	1.34>34	1.34553	1.34572	1.34591	1.34609	1.34628	1.34647	1.34666	1.34684	1.34703
30.0	1.34509	1.34527	1.34546	1 - 34 565	1.34583	1.34602	1.34621	1.34639	1.3465R	1.34677
TTMD					(b)	·/~)			[A]	λ = <b>457.9</b> nm
TEMP	U-0	5-0	10.0		LIMITY (*		30-0	31.0		
°C	U+0	5.0	10.0	<b>SA</b> 15.0		/ <b>m</b> )	30.0	31.0	[A]	λ = <b>457.9</b> mm
	U.O 1.33973	1.34074	1.34174	15.0 1.34276	LIMITY (* 20.0	25.0 1.34479	1.34580	1.34600	32.0 1.34620	33.0
6.0 6.0	1.33973	1.34074	1.34174	15.0 1.34276 1.34272	LINITY (4 20.0 1.34378 1.34373	25.0 1.34479 1.34473	1.34580	1.34400	32.0 1.34620 1.34613	33.0 1.34641 1.34633
°.0 ?.0 4.0	1.33973 1.33972 1.33969	1.34074 1.34072 1.34066	1.34176 1.34172 1.34167	15.0 1.34276 1.34272 1.34266	20.0 1.34378 1.34373 1.34366	25.0 1.34479 1.34473 1.34465	1.34580 1.34573 1.34564	1.34600 1.34593 1.34584	32.0 1.34620 1.34613 1.34604	33.0 1.34641 1.34633 1.34624
C.0 ?.0 4.0 6.0	1.33973 1.33972 1.33969 1.33963	1.34074 1.34072 1.34065 1.34062	1.34176 1.34172 1.34167 1.34160	15.0 1.34276 1.34272 1.34266 1.34258	LINITY (0 20.0 1.34378 1.34373 1.34364 1.34357	25.0 1.34479 1.34473 1.34465 1.34455	1.34580 1.34573 1.34564 1.34554	1.34600 1.34593 1.34584 1.34574	32.0 1.34620 1.34613 1.34604 1.34593	33.0 1.34641 1.34633 1.34624 1.34613
C.0 ?.0 4.0 6.0	1.33973 1.33972 1.33969 1.33963 1.33956	1.34074 1.34072 1.34066 1.34062 1.34053	1.34176 1.34172 1.34167 1.34160 1.34151	15.0 1.34276 1.34272 1.34266 1.34258 1.34249	LINITY (*20.0 1.34378 1.34373 1.34364 1.34357 1.34346	25.0 1.34479 1.34473 1.34465 1.34445	1.34580 1.34573 1.34564 1.34554 1.34542	1.34600 1.34593 1.34584 1.34574	32.0 1.34620 1.34613 1.34604 1.34593 1.34581	33.0 1.34641 1.34633 1.34624 1.34613 1.34600
C.0 ?.0 4.0 6.0 8.0	1.33973 1.33972 1.33969 1.33963 1.33956 1.33940	1.34074 1.34072 1.34066 1.34062 1.34053 1.34043	1.34176 1.34172 1.34167 1.34160 1.34151 1.34140	15.0 1.34276 1.34272 1.34266 1.34258 1.34249 1.34237	20.0 1.34378 1.34373 1.34364 1.34357 1.34346	25.0 1.34479 1.34473 1.34465 1.34455 1.34444 1.34431	1.34580 1.34573 1.34564 1.34554 1.34542	1.34600 1.34593 1.34584 1.34574 1.34561 1.34547	32.0 1.34620 1.34613 1.34604 1.34593 1.34581 1.34567	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34586
0c 0.0 0.0 0.0 0.0 0.0 10.0	1.33973 1.33972 1.33969 1.33963 1.33954 1.3394u 1.33934	1.34074 1.34072 1.34066 1.34062 1.34053 1.34043 1.34031	1.34176 1.34172 1.34167 1.34160 1.34151 1.34140	15.0 1.34276 1.34272 1.34266 1.34258 1.34249 1.34237 1.34223	20.0 1.34378 1.34373 1.34364 1.34357 1.34334 1.34334	25.0 1.34479 1.34473 1.34465 1.34455 1.34444 1.34431 1.34416	1.34580 1.34573 1.34564 1.34554 1.34542 1.34528	1.34600 1.34593 1.34584 1.34574 1.34561 1.34547	32.0 1.34620 1.34613 1.34604 1.34581 1.34581 1.34567 1.34551	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570
C.0 ?.0 4.0 6.0 8.0	1.33973 1.33972 1.33969 1.33963 1.33956 1.33940	1.34074 1.34072 1.34066 1.34062 1.34053 1.34043	1.34176 1.34172 1.34167 1.34160 1.34151 1.34140	15.0 1.34276 1.34272 1.34266 1.34258 1.34249 1.34237	20.0 1.34378 1.34373 1.34364 1.34357 1.34346	25.0 1.34479 1.34473 1.34465 1.34455 1.34444 1.34431	1.34580 1.34573 1.34564 1.34554 1.34542	1.34600 1.34593 1.34584 1.34574 1.345647 1.34551 1.34514 1.34596	32.0 1.34620 1.34613 1.34693 1.34591 1.34567 1.34567 1.34533 1.34515	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570 1.34552 1.34534
C.0 ?.0 4.0 6.0 8.0 10.0 17.0 14.0 14.0	1.33973 1.33972 1.33949 1.33943 1.33956 1.33940 1.33921 1.33906 1.33890	1.34074 1.34062 1.34062 1.34063 1.34043 1.34043 1.34011 1.34011 1.33985	1.34174 1.34172 1.34160 1.34151 1.34140 1.34127 1.34112 1.34096 1.54079	15.0 1.34276 1.34272 1.34264 1.34249 1.34237 1.34223 1.34203 1.34191 1.34174	20.0 1.34378 1.34373 1.34364 1.34357 1.34344 1.34334 1.34320 1.34304 1.34267	25.0 1.34479 1.34465 1.34465 1.34464 1.34416 1.34416 1.34302 1.34302	1.34580 1.34573 1.34554 1.34554 1.34528 1.34528 1.34512 1.34477 1.34458	1.34600 1.34593 1.34594 1.34574 1.34561 1.34547 1.34531 1.34494	32.0 1.34620 1.34613 1.34604 1.34593 1.34567 1.34551 1.34531 1.34515 1.34496	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570 1.34552 1.34534 1.34515
C.0 ?.0 4.0 6.0 8.0 10.0 17.0 14.0 16.0 20.0	1.33973 1.33972 1.33969 1.33963 1.33956 1.33964 1.33934 1.33906 1.33890 1.33873	1.34074 1.34072 1.34062 1.34063 1.34033 1.34031 1.34017 1.34011 1.33985	1.34176 1.34172 1.34167 1.34160 1.34151 1.34140 1.34127 1.34112 1.34079	15.0 1.34276 1.34272 1.34266 1.34258 1.34249 1.3423 1.34208 1.34174 1.34174	20.0 1.34378 1.34373 1.34364 1.34357 1.34346 1.34331 1.34320 1.34304 1.34287 1.34269 1.34269	25.0 1.34479 1.34473 1.34455 1.34455 1.34416 1.34319 1.34302 1.34304 1.34364	1.34580 1.34573 1.34584 1.34554 1.34528 1.34512 1.34497 1.34498	1.34600 1.34593 1.34594 1.34561 1.34567 1.34531 1.34514 1.34496 1.34477	32.0 1.34620 1.34613 1.34604 1.34593 1.34567 1.34551 1.34533 1.34515 1.34496	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570 1.34572 1.34534 1.34515 1.34515
C.O ?-0 4-0 6-0 8-0 10-0 17-0 14-0 18-0 20-0 22-0	1.33973 1.33972 1.33949 1.33945 1.33956 1.33954 1.33934 1.33921 1.33906 1.33873 1.33673	1.34074 1.34062 1.34062 1.34063 1.34031 1.34031 1.34011 1.33985 1.33967 1.33946	1.34176 1.34167 1.34167 1.34160 1.34151 1.34127 1.34127 1.34096 1.34096 1.34061	15.0 1.34276 1.34272 1.34266 1.34257 1.34249 1.34237 1.34208 1.34174 1.34176 1.34176 1.34156	20.0 1.34378 1.34373 1.34364 1.34357 1.34344 1.34320 1.34304 1.34287 1.34769 1.34250 1.34250	25.0 1.34479 1.34473 1.34465 1.34444 1.34431 1.34419 1.34319 1.34364 1.34364 1.34364	1.34580 1.34573 1.34564 1.34554 1.34528 1.34512 1.34495 1.34477 1.34438 1.34438	1.34600 1.34593 1.34594 1.34574 1.34561 1.34531 1.34514 1.34477 1.34477	32.0 1.34620 1.34613 1.34604 1.34593 1.34581 1.34553 1.34515 1.34476 1.34476	33.0  1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570 1.34552 1.34534 1.34515 1.34495
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C.0 ?-0 4-0 6-0 8-0 10-0 17-0 14-0 18-0 20-0 22-0 24-0 24-0	1.33973 1.33969 1.33969 1.33965 1.33956 1.33956 1.33921 1.33906 1.33873 1.33873 1.33873 1.33833	1.34074 1.34060 1.34060 1.34062 1.34043 1.34043 1.34017 1.34011 1.33985 1.33967 1.33928 1.33928 1.33928	1.34176 1.34167 1.34167 1.34160 1.34151 1.34127 1.34112 1.34012 1.34079 1.34061 1.34042 1.34062 1.34062	15.0 1.34276 1.34272 1.34264 1.34299 1.34293 1.34293 1.34208 1.34174 1.34156 1.34136 1.34136 1.34136	LINITY (* 20.0) 1.34378 1.34364 1.34357 1.34346 1.34324 1.34320 1.34320 1.34250 1.34250 1.34250 1.34230	25.0 1.34479 1.34457 1.34455 1.34455 1.34444 1.344316 1.34399 1.34384 1.34384 1.34384 1.34384 1.34384 1.34384 1.34384 1.34384 1.34384	1.34580 1.34573 1.34564 1.34554 1.34528 1.34528 1.34495 1.34458 1.34418 1.34438 1.34438	1.34600 1.34593 1.34594 1.34574 1.34567 1.34593 1.34514 1.34477 1.34457 1.34437 1.34437 1.34437	32.0 1.34620 1.34613 1.34694 1.34593 1.34567 1.34557 1.34516 1.34516 1.34476 1.34476 1.34476 1.34476 1.34476	33.0 1.34641 1.34633 1.34624 1.34613 1.34600 1.34570 1.34572 1.34572 1.34573 1.34575 1.34495 1.34474 1.34452 1.34429
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0.0 0.0 0.0 0.0 17.0 14.0 14.0 14.0 27.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 27.0 10.0	1.33973 1.33972 1.33969 1.33956 1.33934 1.33921 1.33936 1.33873 1.33873 1.33873 1.33873 1.3376n 34.0 1.34651 1.34652 1.34652 1.34652 1.34653 1.34651 1.34653 1.34651 1.34651 1.34651 1.34651 1.34651 1.34651 1.34651 1.34651	1.34074 1.34072 1.34002 1.34003 1.34003 1.34013 1.34017 1.34017 1.33985 1.33985 1.33986 1.33986 1.33986 1.33986 1.33986 1.33987 1.33869 1.34673 1.34673 1.34673 1.34673 1.34673 1.34673 1.34673 1.34673 1.34673 1.34673	1.34176 1.34172 1.34160 1.34151 1.34160 1.34127 1.34112 1.34079 1.34071 1.34002 1.34003	15.0  1.34276 1.34272 1.34248 1.34249 1.34231 1.34231 1.34174 1.34176 1.34156 1.34176 1.34176 1.34721 1.34721 1.34771 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679 1.34679	20.0  1.34378 1.34373 1.34364 1.34337 1.34340 1.34329 1.34250 1.34250 1.34230 1.34250 1.34230 1.34230 1.34230 1.34230 1.34230 1.34230 1.34230 1.34230 1.34230 1.34250 1.34230 1.34250 1.34230 1.34250 1.34230 1.34250 1.34230 1.34250 1.34230	25.0 1.34479 1.34457 1.34455 1.34456 1.34416 1.34398 1.34304 1.34304 1.34304 1.34304 1.34304 1.34324 1.34303 1.34250 1.34250 1.34762 1.34763 1.34763 1.34763 1.34608 1.34608 1.34608 1.34608 1.34567 1.34567 1.34567 1.34568	1.34580 1.34573 1.34554 1.34554 1.34554 1.34558 1.34477 1.34458 1.34438 1.34396 1.34373 1.34373 1.34373 1.34763 1.34763 1.34763 1.34763 1.34763 1.34763 1.34763 1.34763 1.34763 1.34763	1.34600 1.34593 1.34594 1.34561 1.34551 1.34551 1.34577 1.34457 1.34457 1.34451 1.34392 1.34381 1.34393 1.34793 1.34793 1.34793 1.34793 1.34793 1.34794 1.34896 1.34897	32.0 1.34620 1.34613 1.34661 1.34593 1.34591 1.34591 1.34591 1.34591 1.34476 1.34476 1.34433 1.34476 1.34430 1.34386 1.34790 1.34781	33.0  1.34641 1.34633 1.34624 1.34613 1.34600 1.34586 1.34570 1.34552 1.34534 1.34515 1.34495 1.34495 1.34495 1.34495 1.34495 1.34495 1.34496 1.34933 1.34822 1.34833 1.34822 1.34810 1.34796
00 00 00 00 00 00 10-0 14-0 14-0 18-0 20-0 24-0 24-0 24-0 24-0 24-0 4-0 6-0 8-0 10-0 11-	1.33973 1.33979 1.33979 1.33976 1.33956 1.33956 1.33956 1.33956 1.33931 1.33766 1.33873 1.33873 1.33776 34.0 1.34641 1.34642 1.34642 1.34643 1.34632 1.34643 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634 1.34634	1.34074 1.34072 1.34008 1.34093 1.34093 1.34017 1.34091 1.34995 1.33945 1.33985 1.33928 1.33928 1.33859 35.0 1.34652 1.34652 1.34652 1.34652 1.34653 1.34653 1.34653 1.34653 1.34653 1.34653 1.34653 1.34653 1.34653 1.34653	1.34176 1.34172 1.34167 1.34167 1.34161 1.34112 1.34076 1.34071 1.34072 1.34022 1.34022 1.34022 1.34093 1.34693	15.0  1.34276 1.34272 1.34268 1.34298 1.34288 1.34174 1.34156 1.34115 1.34093 1.34071 1.34703 1.34703 1.34703 1.34703 1.34703 1.34703 1.34703 1.34679	20.0  1.34378 1.34366 1.34357 1.34366 1.34394 1.343207 1.34769 1.34763 1.34186 1.34186 1.34186 1.34731 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678 1.34678	25.0  1.34479 1.34473 1.34465 1.34461 1.34349 1.34384 1.34364 1.34326 1.34280 1.34280 1.34270 1.34281 39.0 1.34762 1.34773 1.347718 1.34703 1.34667 1.34608 1.34629 1.34608 1.34629 1.34608 1.34687 1.34688	1.34580 1.34573 1.34554 1.34554 1.34554 1.34512 1.34478 1.34478 1.34478 1.34373 1.34349 1.34349 1.34349 1.34373 1.34763 1.3477	1.34600 1.34593 1.34593 1.34574 1.34571 1.34531 1.34531 1.34571 1.34477 1.34437 1.34436 1.34392 1.34343 41.0 1.34793 1.34793 1.34793 1.34793 1.34770 1.34770 1.34600 1.34660 1.34660 1.34660	32.0  1.34620 1.34613 1.34693 1.34593 1.34591 1.34551 1.34551 1.34561 1.34476 1.34476 1.34433 1.34410 1.34381 1.34381 1.34381 1.34381 1.34381 1.34476 1.34761	33.0  1.34641 1.34633 1.34624 1.34621 1.34620 1.34586 1.34570 1.34586 1.34575 1.34535 1.34474 1.34452 1.34472 1.34405 1.34822 1.34822 1.34822 1.34822 1.34823 1.34704 1.34704 1.34704 1.34704 1.34704 1.34704 1.34684 1.34684

Table A-2. (cont)

					(c)					
TEMP					t thit gay (a	/00)			[A]	$\lambda = 476.5 \text{ nm}$
°C	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33853	1.33964	1.34064	1.34165	1.34265	1.34366	1.34466	1.34487	1.34507	1.34527
2.0	1.33862	1.33961	1.34061	1.34161	1.34240	1.34360	1.34460	1.34480	1.34499	1.34519
4.0	1.33858	1.33957	1.34056	1.34155	1.34253	1.34352	1.34451	1.34471	1.34490	1.34510
6.0	1.33853	1.33951	1.34049	1.34147	1.34245	1.34343	1.34441	1.34460	1.34480	1.34499
8.0	1.33645	1.33942	1.34040	1.34137	1.34234	1.34331	1.34429	1.34448	1.34467	1.34487
10.0	1.33834	1.33932	1.34029	1.34125	1.34222	1.3431#	1.34415	1.34434	1.34453	1.34473
12.0	1.33825	1.33920	1.34016	1.34112	1.34208	1.34304	1.34400	1.34419	1.34438	1.34457
14.0	1.33811	1.33907	1 - 34002	1.34097	1.34193	1.34288	1.34383	1.34402	1.34421	1.34440
16.0	1.33797	1.33692	1.33946	7.34081 1.34064	1.34176	1.34270	1.34365	1.34384	1.34403	1.34422 1.34403
1 <b>5.0</b> 20.0	1.33764	1.33657	1.33951	1.34045	1.34139	1.34252	1.34346	1.34345	1.34364	1.34383
22.0	1.33745	1.33838	1.33931	1.34025	1.34118	1.34212	1.34305	1.34324	1.34342	1.34361
24.0	1.33724	1.33817	1.33910	1.34004	1.34097	1.34190	1.34283	1.34301	1.34320	1.34339
26.0	1.33703	1.33796	1.33848	1.33901	1.34074	1.34167	1.34260	1.34278	1.34297	1.34315
28.0	1.33680	1.33773	1.33865	1.33958	1-34051	1.34143	1.34236	1.34254	1.34273	1.34291
30.0	1.33657	1.33749	1.33041	1.33934	1.34026	1.34119	1.34211	1.34229	1.34248	1.34266
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34547	1.34567	1.34587	1.34607		1.34447	1.34668	1.34688	1.34708	1.34728
2.0	1.34539	1.34559	1.34579	1.34599	1.34619	1.34639	1.34659	1.34679	1.34499	1.34719
4.0	1.34530	1.34550	1.34570	1.34589	1.34609	1.34629	1.34649	1.34668	1.34658	1.34708
6.0	1.34519	1.34537	1.34558	1.34578	1-34597	1.34617	1.34636	1.34656	1.34676	1.34695
8.0	1.34506	1.34526	1.34545	1.34565	1.34584	1.34604	1.34623	1.34642	1.34647	1.34661
10.0 12.0	1.34476	1.34495	1.34515	1.34534	1.34553	1.34572	1.34591	1.34610	1.34630	1.34649
14.0	1.34459	1.34478	1.34497	1.34516	1.34536	1.34554	1.34573	1.34593	1.34612	1.34631
16.0	1.34441	1.34460	1.34479	1.34498	1.34517	1.34536	1.34554	1.34574	1.34592	1.34411
16.0	1.34+22	1.34441	1.34459	1.34478	1.34497	1.34516	1.34535	1.34554	1.34573	1.34591
20.0	1.34401	1.34420	1.34439	1.34458	1.34476	1.34495	1.34514	1.34533		1,34570
22.0	1.34340	1.34396	1.34417	1 - 344 36	1.34455	1.34473	1.34492	1.34511	1.34529	1.34548
24.0 26.0	1.34357	1.34376	1.34395	1.34413	1.34432	1.34450	1.34469	1.34488	1.34506	1.34525 1.34501
28.0	1.34310	1.34328	1.34347	1.34365	1.34344	1.34402	1.34421	1.34439	1.34458	1.34576
30.0	1.34285	1.34303	1.34322	1.34340	1.34359	1.34377	1.34396	1.34414		1.34451
TEMP				8A	(d)	)/ <b></b>			[A]	λ = 488.0 nm
TEMP OC	•••	5.0	10.0	<b>S</b> A		25.0	30.0	31.0	[A]	λ = <b>488.0</b> nm
°C				15.0	20.0	25.0	30.0		32.0	33.0
o.0	1.33#02	1.33902	1.34003		LIMITY (			31.0 1.34424 1.34417		
°C	1.33#02 1.33#01 1.33797	1.33902 1.33900 1.33896	1.34003 1.34000 1.33994	15.0 1.34103 1.34099 1.34093	20.0 20.0 1.34203 1.34198 1.34191	25.0 1.34303 1.34299 1.34290	30.0 1.34404 1.34397 1.34389	1.34424 1.34417 1.34408	32.0 1.3444 1.34437 1.34428	33.0 1.34464 1.34457 1.34448
0.0 2.0 4.0 6.0	1.33#02 1.33#01 1.33797 1.33791	1.33902 1.33900 1.33896 1.33889	1.34003 1.34000 1.33994 1.33987	15.0 1.34103 1.34099 1.34093 1.34085	20.0 1.34203 1.34198 1.34191 1.34182	25.0 1.34303 1.34299 1.34290 1.34280	30.0 1.34404 1.34397 1.34389 1.34378	1.34424 1.34417 1.34408 1.34397	32.0 1.3444 1.34437 1.34428 1.34417	33.0 1.34464 1.34457 1.34448 1.34436
0.0 2.0 4.0 4.0 8.0	1.33#02 1.33#01 1.33797 1.33791	1.33902 1.33900 1.33896 1.33889 1.33881	1.34003 1.34000 1.33994 1.33987 1.33978	15.0 1.34103 1.34099 1.34093 1.34085 1.34075	20.0 1.34203 1.34198 1.34191 1.34182 1.34172	25.0 1.34303 1.34299 1.34290 1.34280 1.34269	30.0 1.34404 1.34397 1.34389 1.34386	1.34424 1.34417 1.34408 1.34397 1.34385	32.0 1.34444 1.34437 1.34428 1.34417 1.34404	33.0 1.34464 1.34457 1.34448 1.34436 1.34424
0.0 2.0 4.0 4.0 8.0 10.0	1.33#02 1.33#01 1.33797 1.33791 1.33784 1.33775	1.33902 1.33900 1.33896 1.33889 1.33871	1.34003 1.34000 1.33994 1.33987 1.33978	15.0 1.34103 1.34099 1.34093 1.34085 1.34063	20.0 1.34203 1.34198 1.34198 1.34182 1.34182 1.34172	25.0 1.34303 1.34299 1.34290 1.34280 1.34269 1.34256	30.0 1.34404 1.34397 1.34389 1.34378 1.34364	1.34424 1.34417 1.34408 1.34397 1.34385 1.34371	32.0 1.3444 1.34437 1.34428 1.34417 1.34404 1.34390	33.0 1.34464 1.34457 1.34448 1.34434 1.34424
0.0 2.0 4.0 6.0 8.0 10.0	1.33802 1.33801 1.33797 1.33791 1.33784 1.33775	1.33902 1.33900 1.33896 1.33889 1.33871 1.33879	1.34003 1.34000 1.33994 1.33987 1.33967 1.33955	15.0 1.34103 1.34099 1.34093 1.34085 1.34063 1.34063	20.0 1.34203 1.34198 1.34191 1.34182 1.34162 1.34160 1.34146	25.0 1.34303 1.34299 1.34290 1.34280 1.34269 1.34264	30.0 1.34404 1.34397 1.34389 1.34378 1.34364 1.34352 1.34337	1.34424 1.34417 1.34408 1.34397 1.34385 1.34371	32.0 1.34444 1.34437 1.34428 1.34417 1.34404 1.34390 1.34375	33.0 1.34464 1.34457 1.34468 1.34436 1.34424 1.34410 1.34394
0.0 2.0 4.0 6.0 8.0 10.0 12.0	1.33#02 1.33#01 1.33797 1.33794 1.33775 1.33775	1.33902 1.33900 1.33896 1.33889 1.33887 1.33871 1.33859	1.34003 1.34000 1.33994 1.33987 1.33987 1.33955	15.0 1.34103 1.34099 1.34093 1.34085 1.34063 1.34050 1.34050	20.0 1.34203 1.34198 1.34191 1.34182 1.34172 1.34160 1.34146	25.0 1.34303 1.34299 1.34290 1.34269 1.34254 1.34241 1.34226	30.0 1.34404 1.34397 1.34369 1.34378 1.34352 1.34352 1.34337	1.34424 1.34417 1.34408 1.34397 1.34385 1.34371	32.0 1.3444 1.34437 1.34428 1.34417 1.34404 1.34390	33.0 1.34464 1.34457 1.34448 1.34434 1.34424
0.0 2.0 4.0 6.0 8.0 10.0	1.33802 1.33801 1.33797 1.33791 1.33784 1.33775	1.33902 1.33900 1.33896 1.33889 1.33871 1.33879	1.34003 1.34000 1.33994 1.33987 1.33967 1.33955	15.0 1.34103 1.34099 1.34093 1.34085 1.34063 1.34063	20.0 1.34203 1.34198 1.34191 1.34182 1.34162 1.34160 1.34146	25.0 1.34303 1.34299 1.34290 1.34280 1.34269 1.34264	30.0 1.34404 1.34397 1.34389 1.34378 1.34364 1.34352 1.34337	1.34424 1.34417 1.34408 1.34397 1.34371 1.34374 1.34334	32.0 1.34444 1.34437 1.34428 1.34417 1.34404 1.34390 1.34375 1.34359 1.34341 1.34322	33.0 1.34464 1.34457 1.34448 1.34436 1.34424 1.34410 1.34394 1.34377
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0.0 2.0 4.0 6.0 10.0 12.0 14.0 18.0 20.0 72.0	1.33#02 1.33#01 1.33797 1.33791 1.33784 1.33775 1.33764 1.33737 1.33737 1.33703	1.33902 1.33900 1.33899 1.33881 1.33871 1.33859 1.33850 1.33815 1.338797	1.34003 1.34000 1.33994 1.33987 1.33967 1.33955 1.33955 1.33941 1.33925 1.33890 1.33870	15.0 1.34103 1.34099 1.34095 1.34075 1.34063 1.34036 1.34036 1.34030 1.34030 1.34030 1.33904 1.33904	20.0 1.34203 1.34198 1.34191 1.34182 1.34172 1.34140 1.34146 1.34134 1.34096 1.34097	25.0 1.34303 1.34299 1.34290 1.34269 1.34269 1.34261 1.34226 1.34208 1.34190 1.34170 1.34149	30.0 1.34404 1.34397 1.34378 1.34364 1.34352 1.34337 1.34303 1.34284 1.34264 1.34243	1.34424 1.34408 1.34397 1.34365 1.34371 1.34354 1.34359 1.34322 1.34303 1.34203	32.0 1.34444 1.34437 1.34428 1.34410 1.34390 1.34375 1.34359 1.34321 1.34322 1.34301	33.0 1.34464 1.34457 1.34468 1.34436 1.34426 1.34410 1.34394 1.34377 1.24360 1.34360 1.34320 1.34320 1.34329
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0.0 2.0 4.0 6.0 10.0 12.0 14.0 16.0 20.0 72.0 28.0 28.0 30.6	1.33#02 1.33#01 1.33794 1.337784 1.33775 1.33773 1.33737 1.33737 1.33703 1.33684 1.33664 1.33662 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650	1.33902 1.33990 1.33889 1.33881 1.33871 1.33871 1.33815 1.33797 1.33775 1.33756 1.33756 1.33756 1.34476 1.34476 1.34476 1.34476 1.34476	1.34000 1.33994 1.33997 1.33997 1.33995 1.33995 1.33990 1.33890 1.33890 1.33890 1.33890 1.33890 1.33890 1.33890 1.34995 1.34995 1.34995 1.34995 1.34495	15.0 1.34103 1.34099 1.34095 1.34085 1.34050 1.34050 1.34020 1.34020 1.33964 1.33963 1.33967 1.33877 37.0 1.34544 1.34536 1.34536 1.34536 1.34536 1.34536 1.34536 1.34536	20.0  1.34203 1.34198 1.34191 1.34182 1.34172 1.34160 1.34164 1.34077 1.34057	25.0  1.34303 1.34293 1.34290 1.34269 1.34269 1.34226 1.34226 1.34210 1.34190 1.34170 1.34141 1.34057  39.0 1.345546 1.345546 1.345546	30.0 1.34404 1.34397 1.343478 1.34364 1.34321 1.34303 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.34264 1.345173 1.34149 40.0 1.34596 1.34596 1.34596 1.34596 1.34576	1.34424 1.34417 1.34408 1.34397 1.34385 1.34339 1.34339 1.34283 1.34283 1.34283 1.34284 1.34216 1.34192 1.34167	32.0 1.34444 1.34427 1.34428 1.34417 1.34340 1.34375 1.34351 1.34321 1.34280 1.34280 1.34280 1.34280 1.34210 1.34210 1.3428	33.0  1.34464 1.34457 1.34458 1.34458 1.34424 1.34410 1.34394 1.34390 1.34390 1.34390 1.34299 1.34276 1.34276 1.34279 1.34276 1.34291 1.34204  43.0  1.34664 1.34656 1.34655 1.34652 1.34652
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0.0 2.0 4.0 6.0 8.0 10.0 14.0 16.0 20.0 24.0 26.0 28.0 30.6	1.33#02 1.33#01 1.33794 1.337784 1.33775 1.33775 1.33773 1.33773 1.33764 1.33684 1.33684 1.33684 1.33684 1.33442 1.33442 1.34477 1.34467 1.34467 1.34463 1.34477 1.34463 1.34477 1.34463 1.34477 1.34463 1.34477 1.34463 1.34473 1.34379 1.34379 1.34379	1.33902 1.33900 1.33896 1.33881 1.33871 1.33877 1.33777 1.33776 1.33771 1.33756 1.33712 1.33688 35.0 1.34460 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470 1.34470	1.34000 1.33994 1.339978 1.339978 1.33995 1.33941 1.33995 1.33940 1.33849 1.33849 1.33878 2.00 1.34524 1.34516 1.34526 1.34495 1.34495 1.34495 1.34495 1.34436 1.34332	15.0 1.34103 1.34099 1.34095 1.34085 1.34050 1.34050 1.34002 1.33983 1.33983 1.33983 1.33987 37.0 1.34584 1.34526 1.34526 1.34526 1.34526 1.34526 1.34487 1.34396 1.34396 1.34396	20.0  1.34203 1.34198 1.34191 1.34182 1.34172 1.34160 1.34164 1.34057 1.34057 1.34057 1.34057 1.34057 1.34057 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564 1.34564	25.0 1.34303 1.34297 1.34280 1.34269 1.34261 1.34261 1.34208 1.34208 1.34190 1.34170 1.34178 1.34128 1.341057 30.0 1.34584 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586 1.34576 1.34586	30.0 1.34404 1.34397 1.34398 1.34366 1.34337 1.34303 1.34284 1.34284 1.34284 1.34281 1.34198 1.34198 1.34198 1.34198 1.34596	1.34424 1.34417 1.34408 1.34397 1.34385 1.34371 1.34339 1.34283 1.34283 1.34282 1.34281 1.34216 1.34216 1.34216 1.34593 1.345647 1.34594 1.34593 1.34594 1.34597 1.34547 1.34670	32.0 1.34444 1.34428 1.34417 1.34428 1.34341 1.34359 1.34341 1.34280 1.34258 1.34210 1.34185 42.0 1.34488 1.34258 1.34210 1.34258 1.34258 1.34258 1.34210 1.344488	33.0  1.34464 1.34457 1.34458 1.34458 1.34458 1.34458 1.34340 1.34340 1.34340 1.34340 1.3429 1.34276 1.3429 1.34276 1.3429 1.34276 1.3429 1.34204  43.0  1.34664 1.34655 1.34652 1.34555 1.34558 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34528 1.34565
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Table A-2. (cont)

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-									[A]	λ = <b>496.5</b> nm
TEMP	0.0	5.0	10.0	15.0	LIMITY (* 20.0	25.0	30.0	31.0	32.0	33.0
0.0 2.0	1.33759	1.33659	1.33959	1.34059	1.34159	1.34259	1.34340	1.34380	1.34400	1.34419 1.34412
4.0	1.33754	1.33852	1.33951	1.34049	1.34148	1.34246	1.34344	1.34364	1.34384	1.34403
4.0	1.33746	1.33846	1.33943	1.34041	1.34136	1.34236	1.34333	1.34353	1.34372	1.34392
*•0	1-33741	1.33837	1.33934	1.34031	1.34128	1.34224	1.34321	1.34340	1.34360	1.34379
10.0 12.0	1.33731	1.33827	1.33923	1.34019	1.34115	1.34211	1.34307	1.34327	1.34346	1.34365 1.34350
14.0	1.33708	1.33403	1.33897	1.33992	1.34007	1.34181	1.34276	1.34295	1.34314	1.34333
16.6	1.33694	1.33788	1.33882	1,33976	1.34070	1.34164	1.34258	1.34277	1.34296	1.34315
18.0	1.33678	1.33771	1.33865	1.33959	1.34052	1.34146	1.34239	1.34258	1.34277	1.34296
20.0 22.0	1.33660	1.33753	1.33846	1.33940	1.34033	1.34126	1.34219	1.34238	1.34257	1.34275 1.34254
24.0	1.33641	1.33714	1.33827	1.33899	1.44013	1.34084	1.34177	1.34217	1.34235	1.34232
26.0	1.33599	1.33692	1.33784	1.33877	1.33969	1.34061	1.34154	1.34172	1-34190	1.34209
28.0	1.33577	1.33669	1.33761	1.33853	1.33946	1.34037	1.34130	1.34148	1.34166	1.34185
30.0	1.33554	1.33645	1.33737	1.33829	1.33921	1.34013	1.34105	1.34123	1.34141	1.34160
	34.0	35.0	36.0	37.C	38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34439	1.34460	1.34480	1.34499	1.34520	1.34540	1.34559	1.34580	1.34600	1.34620
2.0	1.344.32	1.34452	1.34472	1.34492	1.34512	1.34532	1.34551	1.34571	1.34591	1.34611
4 • O 4 • O	1.34423	1.34443	1.34462	1.34482	1.34502	1.34521	1.34541	1.34561	1.34580	1.34600 1.34587
8.n	1.34399	1.34418	1.34437	1.34457	1.34490	1.34495	1.34515	1.34543	1.34553	1.34573
10.0	1.34384	1.34403	1.34423	1.34442	1.34461	1.34480	1.34499	1.34518	1.34538	1.34557
12.0	1.34369	1.34347	1.34407	1.34420	1.34445	1.34464	1.34483	1.54502	1.34521	1.34540
14-0	1.34352	1.34371	1.34390	1.34409	1-34428	1.34447	1.34446	1.34484	1.34503	1-34522
16.0 18.0	1.34334	1.34357	1.34371	1.34390	1.34409	1.34426	1.34447	1.34445	1.34464	1.34503 1.34483
70.0	1.34294	1.34313	1.34331	1.34350	1.34369	1.34387	1.34406	1.34424	1.34443	1.34462
22.0	1.34273	1.34291	1.34310	1.34328	1.54347	1.34366	1.34384	1.34403	1.34421	1.34440
24.0	1-34251	1.34259	1.34268	1.34306	1.34325	1.34343	1.34362	1.34360	1.34399	1-34417
26.0 28.0	1.34227	1.34246	1.34264	1.34283	1.34301	1.34320	1.34338	1.34357	1.34375	1.34394
30.0	1.34170	1.34196	1.34715	1.34258	1.34252	1.34795	1.34288	1.34332	1.34351	1.34349
					<b>(f)</b>					
					<b>(1)</b>				[A]	λ = <b>514.5 nm</b>
TEMP	<u></u>				LIMITY (					<del></del>
TEMP °C	0.0	3.0	10.0	15.0		/ <b>(n)</b>	30.0	31.0	[A]	λ = <b>514.5 nm</b>
	0.0	3.0 1.33774	10.0		LIMITY (		30.0 1.34273	31.0 1.34293		<del></del>
5.0 0.0 OC	1.33674 1.33673	1.33774	1.33873	15.0 1.33973 1.33969	20.0 1.34073 1.34068	25.0 1.34173 1.34167	1.34273	1.34293	32.0	33.0
0.0 2.0 4.0	1.33674 1.33673 1.33669	1.33774 1.33771 1.33767	1.33873 1.33870 1.33865	15.0 1.33973 1.33969 1.33963	20.0 20.0 1.34073 1.34068 1.34061	25.0 1.34173 1.34167 1.34159	1.34273 1.34266 1.34257	1.34293 1.34246 1.34277	32.0 1.34317 1.34305 1.34296	33.0 1.34332 1.34325 1.34316
0.0 2.0 4.0	1.33674 1.33673 1.33669 1.33664	1.33774 1.33771 1.33767 1.33761	1.33873 1.33870 1.33865 1.33858	15.0 1.33973 1.33969 1.33963 1.33955	20.0 1.34073 1.34068 1.34061 1.34052	25.0 1.34173 1.34167 1.34159 1.34149	1.34273 1.34266 1.34257 1.34246	1.34293 1.34246 1.34277 1.34266	32.0 1.34312 1.34305 1.34296 1.34285	33.0 1.34332 1.34325 1.34316 1.34305
0.0 2.0 4.0	1.33674 1.33673 1.33669	1.33774 1.33771 1.33767	1.33873 1.33870 1.33865	15.0 1.33973 1.33969 1.33963	20.0 20.0 1.34073 1.34068 1.34061	25.0 1.34173 1.34167 1.34159	1.34273 1.34266 1.34257	1.34293 1.34246 1.34277	32.0 1.34317 1.34305 1.34296	33.0 1.34332 1.34325 1.34316
0.0 2.0 4.0 6.0 8.0 10.0	1.33674 1.33673 1.33669 1.33664 1.33656 1.33647 1.33636	1.33774 1.33771 1.33767 1.33761 1.33752 1.33742	1.33873 1.33870 1.33865 1.33858 1.33849 1.33838	15.0 1.33973 1.33969 1.33963 1.33955 1.33945 1.33933 1.33920	20.0 1.34073 1.34068 1.34061 1.34052 1.34029 1.34015	25.0 1.34173 1.34167 1.34159 1.34149 1.34138 1.34125 1.34110	1.34273 1.34266 1.34257 1.34246 1.34234 1.34220	1.34293 1.34246 1.34277 1.34266 1.34253 1.34239	32.0 1.34312 1.34305 1.34296 1.34265 1.24273 1.34259 1.34243	33-0 1-34332 1-34325 1-34316 1-34305 1-34292 1-34276 1-34262
0.0 2.0 4.0 6.0 8.2 10.0 12.0	1.33674 1.33673 1.33669 1.33664 1.33647 1.33636 1.33624	1.33774 1.33771 1.33767 1.33762 1.33752 1.33742 1.33731	1.33873 1.33870 1.33865 1.33858 1.33838 1.33826 1.33812	15.0 1.33973 1.33969 1.33963 1.33965 1.33936 1.33920 1.33906	20-0 1-34073 1-34068 1-34061 1-34052 1-34042 1-34029 1-34015 1-34000	25.0 1.34173 1.34167 1.34159 1.34149 1.34138 1.34125 1.34110 1.34094	1.34273 1.34266 1.34257 1.34246 1.34234 1.34220 1.34205 1.34188	1.34293 1.34286 1.34277 1.34266 1.34253 1.34239 1.34224 1.34207	32.0 1.34317 1.34305 1.34296 1.34285 1.24273 1.34259 1.34243 1.34226	33.0 1.34332 1.34325 1.34316 1.34316 1.34305 1.34272 1.34278 1.34278
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0	1.33674 1.33673 1.33669 1.33664 1.33656 1.33647 1.33636 1.33624 1.33609	1.33774 1.33771 1.33767 1.33762 1.33752 1.33742 1.33731 1.33718 1.33703	1.33873 1.33870 1.33865 1.33858 1.33838 1.33838 1.33826 1.33812 1.338796	15.0 1.33973 1.33963 1.33955 1.33945 1.33920 1.33906 1.33906	20.0 1.34073 1.34068 1.34061 1.34061 1.34052 1.34042 1.34015 1.34010 1.34010	25.0 1.34173 1.34157 1.34159 1.34138 1.34125 1.34110 1.34094 1.34077	1.34273 1.34266 1.34257 1.34246 1.34234 1.34220 1.34205 1.34188 1.34170	1.34293 1.34286 1.34277 1.34266 1.34253 1.34239 1.34224 1.34207 1.34189	32.0 1.34317 1.34305 1.34296 1.34285 1.74273 1.34259 1.34243 1.34226	33.0 1.34332 1.34325 1.34316 1.34305 1.34202 1.34278 1.34262 1.34245 1.34245
0.0 2.0 4.0 6.0 8.2 10.0 12.0	1.33674 1.33673 1.33669 1.33664 1.33647 1.33636 1.33624	1.33774 1.33771 1.33767 1.33762 1.33752 1.33742 1.33731	1.33873 1.33870 1.33865 1.33858 1.33838 1.33826 1.33812	15.0 1.33973 1.33969 1.33963 1.33965 1.33936 1.33920 1.33906	20-0 1-34073 1-34068 1-34061 1-34052 1-34042 1-34029 1-34015 1-34000	25.0 1.34173 1.34167 1.34159 1.34149 1.34138 1.34125 1.34110 1.34094	1.34273 1.34266 1.34257 1.34246 1.34234 1.34220 1.34205 1.34188	1.34293 1.34286 1.34277 1.34266 1.34253 1.34239 1.34224 1.34207	32.0 1.34317 1.34305 1.34296 1.34285 1.24273 1.34259 1.34263 1.34263 1.34264 1.34264	33-0 1-34332 1-34325 1-34325 1-34316 1-34305 1-34278 1-34262 1-34262 1-34245 1-34227 1-34207
0.0 2.0 4.0 4.0 8.0 10.0 17.0 14.0 18.0 20.0 22.0	1.33674 1.33673 1.33669 1.33664 1.33654 1.33636 1.33624 1.33609 1.33573 1.33576	1.33774 1.33767 1.33767 1.33761 1.33752 1.33742 1.33718 1.33703 1.33686 1.33646	1.33873 1.33870 1.33865 1.33869 1.33838 1.33826 1.33826 1.33876 1.33776 1.33776	15.0 1.33949 1.33963 1.33945 1.33945 1.33945 1.33920 1.33900 1.33874 1.33834	20-0 1.34073 1.34061 1.34061 1.34062 1.34029 1.34015 1.34010 1.33983 1.33965 1.33977	25-0 1-34173 1-34147 1-34149 1-34138 1-34125 1-34110 1-34094 1-34094 1-34058 1-34058 1-34058 1-34058	1.34273 1.34246 1.34257 1.34246 1.34234 1.34205 1.34188 1.34170 1.34151 1.34132	1.34293 1.34286 1.34277 1.34266 1.34253 1.34234 1.34207 1.34189 1.34170 1.34170	32.0 1.34312 1.34395 1.34296 1.34285 1.34259 1.34243 1.34226 1.34208 1.34169 1.34169	33.0 1.34332 1.34325 1.34316 1.34305 1.34202 1.34276 1.34262 1.34262 1.34267 1.34207 1.34207 1.34167
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0	1.33674 1.33669 1.33666 1.33666 1.33667 1.33657 1.33629 1.33629 1.33573 1.33573	1.33774 1.33761 1.33761 1.33762 1.33742 1.33742 1.33718 1.33703 1.33686 1.33649 1.33649	1.33873 1.33870 1.33865 1.33858 1.33858 1.33826 1.33812 1.33779 1.33779 1.33762 1.33762	15.0 1.33973 1.33963 1.33995 1.33995 1.33945 1.33906 1.33900 1.33890 1.33894 1.33894 1.33894	20.0 1.34004 1.34064 1.34061 1.34052 1.34042 1.34061 1.34000 1.33903 1.33903 1.33943 1.33943 1.33977 1.33977	25.0 1.34173 1.34167 1.34159 1.34138 1.34125 1.34110 1.34094 1.34077 1.34034 1.34034 1.34039 1.34039	1.34273 1.34266 1.34257 1.34246 1.34220 1.34220 1.34205 1.34188 1.34170 1.34151 1.34132 1.34131	1.34293 1.34284 1.34277 1.34269 1.34253 1.34239 1.34224 1.34207 1.34190 1.34190 1.34108	32.0 1.34317 1.34305 1.34205 1.34253 1.34253 1.34254 1.34264 1.34109 1.34109 1.34148	33-0 1.34332 1.34325 1.34325 1.34316 1.34202 1.34262 1.34262 1.34262 1.34267 1.34267 1.34167 1.34167
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 26.0	1.33674 1.33669 1.33669 1.33666 1.33656 1.33656 1.33626 1.33629 1.33593 1.33576 1.33577 1.33537	1.33774 1.33761 1.33761 1.33762 1.33742 1.33718 1.33718 1.33686 1.33648 1.33649 1.33649	1.33873 1.33870 1.33865 1.33898 1.33838 1.33826 1.33812 1.33779 1.33779 1.33772 1.33772 1.33772	15.0 1.33964 1.33963 1.33965 1.33965 1.33965 1.33920 1.33920 1.33870 1.33872 1.33874 1.33814 1.33814 1.33814	20.0 1.34073 1.34068 1.34061 1.34052 1.34062 1.34062 1.34010 1.34010 1.33963 1.33967 1.33997 1.33997 1.33901 1.33963	25-0 1-34173 1-34167 1-34159 1-34138 1-34125 1-34110 1-34079 1-34078 1-34079 1-34079 1-33998 1-33998	1.34273 1.34246 1.34257 1.34246 1.34230 1.34220 1.34188 1.34170 1.34151 1.34132 1.3434010 1.34058	1.34293 1.34286 1.34277 1.34266 1.34253 1.34239 1.34224 1.34207 1.34190 1.34190 1.34190 1.34986	32.0 1.34312 1.34295 1.34295 1.34265 1.24273 1.34263 1.34264 1.34169 1.34169 1.34164 1.34167 1.34164	33.0 1.34332 1.34325 1.34316 1.34316 1.34305 1.34272 1.34272 1.34272 1.34262 1.34267 1.34207 1.34167 1.34167 1.34167 1.34145
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0	1.33674 1.33669 1.33666 1.33666 1.33667 1.33657 1.33629 1.33629 1.33573 1.33573	1.33774 1.33761 1.33761 1.33762 1.33742 1.33742 1.33718 1.33703 1.33686 1.33649 1.33649	1.33873 1.33870 1.33865 1.33858 1.33858 1.33826 1.33812 1.33779 1.33779 1.33762 1.33762	15.0 1.33973 1.33963 1.33995 1.33995 1.33945 1.33906 1.33900 1.33890 1.33894 1.33894 1.33894	20.0 1.34004 1.34064 1.34061 1.34052 1.34042 1.34061 1.34000 1.33903 1.33903 1.33943 1.33943 1.33977 1.33977	25.0 1.34173 1.34167 1.34159 1.34138 1.34125 1.34110 1.34094 1.34077 1.34034 1.34034 1.34039 1.34039	1.34273 1.34266 1.34257 1.34246 1.34220 1.34220 1.34205 1.34188 1.34170 1.34151 1.34132 1.34131	1.34293 1.34284 1.34277 1.34269 1.34253 1.34239 1.34224 1.34207 1.34190 1.34190 1.34108	32.0 1.34317 1.34305 1.34205 1.34253 1.34253 1.34254 1.34264 1.34109 1.34109 1.34148	33-0 1.34332 1.34325 1.34325 1.34316 1.34202 1.34262 1.34262 1.34262 1.34267 1.34267 1.34167 1.34167
0.0 2.0 4.0 6.0 8.0 17.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 27.0	1.33674 1.33669 1.33669 1.33664 1.33656 1.33626 1.33626 1.33576 1.33576 1.33557 1.33531 1.33516	1.33774 1.33771 1.33767 1.33762 1.33752 1.33718 1.33718 1.33718 1.33688 1.33649 1.33649 1.33649 1.33649	1.33873 1.33870 1.33865 1.33865 1.33869 1.33826 1.33812 1.33776 1.33776 1.33772 1.33722 1.33722 1.33700 1.33701	15.0 1.33973 1.33964 1.33965 1.33995 1.33943 1.33920 1.33920 1.33890 1.33894 1.33894 1.33894 1.33894 1.33894 1.33894 1.33769	20.0 1.34073 1.34061 1.34061 1.34052 1.34029 1.34015 1.34015 1.34016 1.34016 1.34016 1.33965 1.33977 1.33977 1.33906 1.33684 1.33684	25.0 1.34173 1.34167 1.34169 1.34169 1.34189 1.34125 1.34094 1.34094 1.34077 1.34058 1.34034 1.34039 1.33998 1.33976 1.339752	1.34273 1.34266 1.34257 1.34226 1.34234 1.34220 1.34158 1.34170 1.34151 1.34132 1.34111 1.34090 1.34064	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34207 1.34190 1.34190 1.34190 1.34106 1.34086	32.0 1.34317 1.34305 1.34205 1.34205 1.34205 1.34220 1.34220 1.34208 1.34109 1.34107 1.34104 1.34107	33.0 1.34332 1.34325 1.34316 1.34305 1.34292 1.34262 1.34262 1.34262 1.34267 1.3427 1.34187 1.34187 1.34187 1.34187 1.34187
0.0 2.0 4.0 6.0 8.0 17.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 27.0	1.33674 1.33669 1.33669 1.33664 1.33656 1.33626 1.33626 1.33576 1.33576 1.33557 1.33531 1.33516	1.33774 1.33771 1.33767 1.33762 1.33752 1.33718 1.33718 1.33718 1.33688 1.33649 1.33649 1.33649 1.33649	1.33873 1.33870 1.33865 1.33865 1.33869 1.33826 1.33812 1.33776 1.33776 1.33772 1.33722 1.33722 1.33700 1.33701	15.0 1.33973 1.33964 1.33965 1.33995 1.33943 1.33920 1.33920 1.33890 1.33894 1.33894 1.33894 1.33894 1.33894 1.33894 1.33769	20.0 1.34073 1.34061 1.34061 1.34052 1.34029 1.34015 1.34015 1.34016 1.34016 1.34016 1.33965 1.33977 1.33977 1.33906 1.33684 1.33684	25.0 1.34173 1.34167 1.34169 1.34169 1.34189 1.34125 1.34094 1.34094 1.34077 1.34058 1.34034 1.34039 1.33998 1.33976 1.339752	1.34273 1.34266 1.34257 1.34226 1.34234 1.34220 1.34158 1.34170 1.34151 1.34132 1.34111 1.34090 1.34064	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34207 1.34190 1.34190 1.34190 1.34106 1.34086	32.0 1.34317 1.34305 1.34205 1.34205 1.34205 1.34220 1.34220 1.34208 1.34109 1.34107 1.34104 1.34107	33.0  1.34332 1.34325 1.34316 1.34305 1.34292 1.34276 1.34262 1.34267 1.34267 1.34267 1.34167 1.34167 1.34145 1.34122 1.34099
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 26.0 28.0 30.0	1.33674 1.33669 1.33669 1.33666 1.33656 1.33676 1.33626 1.33629 1.33576 1.33577 1.33577 1.33577 1.33577	1.33774 1.33771 1.33767 1.33762 1.33752 1.33718 1.33718 1.33703 1.33648 1.33649 1.33649 1.33651	1.33873 1.33870 1.33865 1.33865 1.33869 1.33826 1.33826 1.33822 1.33796 1.33761 1.33762 1.33762 1.33770 1.33653	15.0 1.33947 1.33969 1.33963 1.33995 1.33995 1.33990 1.33906 1.33872 1.33874 1.33814 1.33792 1.33769 1.33744	20.0 1.34073 1.34068 1.34061 1.34062 1.34062 1.34015 1.34010 1.33963 1.33967 1.33967 1.33960 1.33864 1.33860 1.33860	25.0 1.34173 1.34167 1.34159 1.34149 1.34138 1.34120 1.34094 1.34079 1.34019 1.34019 1.34019 1.33952 1.33978 1.33978	1.34273 1.34266 1.34257 1.34246 1.34234 1.34220 1.34281 1.34170 1.34111 1.34192 1.34111 1.34090 1.34068 1.34044 1.34019	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34224 1.34207 1.34150 1.34150 1.34106 1.34086 1.34086	32.0 1.34305 1.34296 1.34295 1.34293 1.34293 1.34293 1.34293 1.34294 1.34109 1.34109 1.34109 1.34109 1.34080 1.34080 1.34090	33.0  1. 34332 1. 34325 1. 34325 1. 34316 1. 34305 1. 34278 1. 34278 1. 34262 1. 34245 1. 34227 1. 34267 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 3417
0.0 2.0 4.0 6.0 8.0 17.0 14.0 16.0 20.0 22.0 24.0 24.0 26.0 30.0	1.33674 1.33667 1.33669 1.33656 1.33656 1.33636 1.33636 1.33624 1.33573 1.33573 1.33577 1.33517	1.33774 1.33771 1.33761 1.33752 1.33742 1.33718 1.33718 1.33703 1.33686 1.33649 1.33649 1.33649 1.33649 1.33606	1.33873 1.33870 1.33865 1.33868 1.33898 1.33826 1.33812 1.33779 1.33771 1.33762 1.33772 1.33702 1.33702	15.0 1.33973 1.33964 1.33965 1.33995 1.33945 1.33920 1.33920 1.33890 1.33894 1.33894 1.33894 1.33769 1.33769 1.33769	20.0 1.34073 1.34061 1.34061 1.34052 1.34029 1.34015 1.34010 1.33905 1.33905 1.33977 1.33977 1.33906 1.33684 1.33684 1.33800 1.33836	25.0 1.34173 1.34167 1.34169 1.34169 1.3419 1.3419 1.3410 1.34077 1.34034 1.34034 1.34034 1.34039 1.33978 1.33978 1.33972 1.33927	1.34273 1.34264 1.34254 1.34264 1.34205 1.34205 1.34108 1.34151 1.34151 1.34151 1.34064 1.34064 1.34064 1.34064	1.34293 1.34284 1.34277 1.34260 1.34253 1.34224 1.34207 1.34189 1.34170 1.34190 1.34130 1.34082 1.34082 1.34082 1.34082	32.0 1.34317 1.34395 1.34295 1.34295 1.34293 1.34293 1.34293 1.34293 1.34291 1.34108 1.34108 1.34105 42.0 1.34508	33.0  1.34332 1.34325 1.34316 1.34305 1.34292 1.34292 1.34245 1.34247 1.34267 1.34267 1.34167 1.34167 1.34167 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417 1.3417
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 24.0 26.0 30.0	1.33674 1.33669 1.33669 1.33666 1.33656 1.33676 1.33626 1.33576 1.33577 1.33577 1.33577 1.33577 1.33577 1.33571 1.33470	1.33774 1.33771 1.33767 1.33762 1.33752 1.33718 1.33718 1.33703 1.33648 1.33649 1.33649 1.33649 1.33651	1.33873 1.33870 1.33865 1.33865 1.33869 1.33879 1.33872 1.33796 1.33761 1.33762 1.33772 1.33700 1.33653	15.0 1.33973 1.33963 1.33995 1.33995 1.33995 1.33990 1.33890 1.33890 1.33891 1.33894 1.33794 1.33794 1.33744 37.0 1.34412 1.34404 1.34994	20.0 1.34073 1.34068 1.34061 1.34052 1.34052 1.34052 1.34015 1.34010 1.33967 1.33967 1.33967 1.33966 1.33864 1.33860 1.33860 1.33860 1.33864 1.34432 1.34432 1.34432	25.0 1.34173 1.34147 1.34149 1.34149 1.34125 1.34125 1.34094 1.34077 1.34077 1.34034 1.34032 1.33998 1.33976 1.33952 1.33927 39.0 1.34452 1.34452 1.34454	1.34273 1.34266 1.34257 1.34234 1.34230 1.34200 1.34188 1.34170 1.34151 1.34132 1.34111 1.34090 1.34068 1.34044 1.34019	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34224 1.34207 1.34150 1.34150 1.34106 1.34086 1.34086	32.0 1.34305 1.34296 1.34295 1.34293 1.34293 1.34293 1.34293 1.34294 1.34109 1.34109 1.34109 1.34109 1.34080 1.34080 1.34090	33.0  1. 34332 1. 34325 1. 34325 1. 34316 1. 34305 1. 34278 1. 34278 1. 34262 1. 34245 1. 34227 1. 34267 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 3417
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0.0 7.0 4.0 4.0 8.0 17.0 14.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 24.0 24	1.33674 1.33673 1.33669 1.33666 1.33656 1.33656 1.33673 1.33573 1.33573 1.33573 1.33573 1.33573 1.33574 1.33577 1.33577	1.33774 1.33771 1.33767 1.33762 1.33732 1.33731 1.33718 1.33718 1.33648 1.33648 1.33649 1.33649 1.33649 1.33649 1.33641	1.33873 1.33870 1.33865 1.33858 1.33859 1.33826 1.33826 1.33826 1.33779 1.33761 1.33772 1.33772 1.33772 1.33653	15.0 1.33973 1.33964 1.33965 1.33995 1.33996 1.33990 1.33872 1.33874 1.33874 1.33874 1.33769 1.33764 1.33764 1.33764 1.3406 1.34406 1.34406 1.344364 1.344364 1.344364	20.0 1.34073 1.34068 1.34061 1.34062 1.3402 1.34012 1.34010 1.33983 1.33967 1.33977 1.33976 1.33860 1.33860 1.33860 1.33860 1.33860 1.33860 1.34612 1.34612 1.34612 1.34612 1.34612 1.34612 1.34612	25.0  1.34173 1.34167 1.34159 1.34149 1.34125 1.34101 1.34074 1.34078 1.34078 1.33978 1.33978 1.33978 1.33978 1.34444 1.34433 1.34421 1.34408	1.34273 1.34246 1.34234 1.34220 1.34205 1.34108 1.34171 1.34132 1.34151 1.34090 1.34068 1.34064 1.34019	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34229 1.34189 1.34190 1.34190 1.34106 1.34080 1.34087 41.0 1.34087 41.0 1.34683 1.34683 1.34683 1.34683 1.34683 1.34683 1.34683	32.0 1.34317 1.34305 1.34265 1.34265 1.34263 1.34263 1.34264 1.34169 1.34169 1.34169 1.34169 1.34164 1.34080 1.34055 42.0	33-0  1.34332 1.34325 1.34325 1.34325 1.34262 1.34262 1.34262 1.34267 1.34267 1.34267 1.34167 1.34167 1.34167 1.34167 1.3417 1.3417 1.34181 1.34122 1.34099 1.34073
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0.0 2.0 4.0 4.0 8.0 17.0 14.0 18.0 20.0 22.0 24.0 24.0 26.0 30.0	1.33674 1.33673 1.33660 1.33656 1.33656 1.33620 1.33573 1.33577 1.34577 1.3457	1.33774 1.33771 1.33761 1.33762 1.33731 1.33718 1.33718 1.33703 1.33686 1.33649 1.33649 1.33649 1.33649 1.33649 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365	1.33873 1.33870 1.33858 1.33858 1.33826 1.33822 1.33779 1.33762 1.33772 1.33762 1.33762 1.343673 1.34363 1.34375 1.34363 1.34325 1.34321 1.34321 1.34321	15.0 1.33973 1.33964 1.33965 1.33995 1.33973 1.33970 1.33872 1.33874 1.33874 1.33874 1.33769 1.33764 1.34374 37.0 1.34412 1.34394 1.34394 1.34394 1.34394 1.34396	20.0 1.34073 1.34068 1.34061 1.34052 1.34052 1.34015 1.34015 1.34015 1.34010 1.33967 1.33967 1.33967 1.33967 1.33960 1.33684 1.33684 1.33684 1.33684 1.344362 1.344362 1.344368	25.0  1.34173 1.34167 1.34149 1.34149 1.34138 1.34120 1.34077 1.34078 1.34039 1.33978 1.33972  39.0 1.34452 1.34403 1.34403 1.34528 1.34539 1.34539 1.34539	1.34273 1.34266 1.34236 1.34246 1.34220 1.34205 1.34151 1.34192 1.34111 1.34090 1.34064 1.34019  •0.0 1.34472 1.34461 1.34493 1.34453 1.34451 1.34397 1.34377	1.34293 1.34284 1.34277 1.34260 1.34253 1.34224 1.34207 1.34189 1.34170 1.34130 1.34082 1.34082 1.34082 1.34082 1.34483 1.34473 1.34484 1.34484 1.34484 1.34484 1.34494 1.34494 1.34494 1.34494 1.34494	32.0 1.34317 1.34325 1.34285 1.34283 1.34263 1.34268 1.34169 1.34168 1.34104 1.34080 1.34055 42.0 1.34503 1.34406 1.34433 1.34450 1.34433	33.0  1. 34332 1. 34325 1. 34325 1. 34305 1. 34292 1. 34262 1. 34262 1. 34267 1. 34267 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34522 1. 34099 1. 34073
0.0 2.0 4.0 4.0 8.0 17.0 14.0 18.0 20.0 24.0 24.0 24.0 26.0 30.0	1.33674 1.33669 1.33669 1.33656 1.33656 1.33636 1.33593 1.33593 1.33593 1.33593 1.33597 1.33597 1.33597 1.33597 1.33597 1.33597 1.33597 1.3491	1.33774 1.33771 1.33761 1.33752 1.33731 1.33731 1.33731 1.33731 1.3366 1.3366 1.3366 1.3366 1.3366 1.3366 1.3366 1.3366 1.3366 1.3366 1.3436 1	1.33873 1.33870 1.33858 1.33858 1.33858 1.33858 1.33872 1.33779 1.33770 1.33772 1.33772 1.33772 1.33772 1.33772 1.33772 1.33673 1.34372 1.34364 1.34375 1.34373 1.3437	15.0 1.33973 1.33964 1.33965 1.33995 1.33995 1.33920 1.33890 1.33892 1.33894 1.33894 1.33894 1.33894 1.33894 1.33769 1.34404 1.34302	20-0 1.34073 1.34068 1.34061 1.34062 1.34022 1.34012 1.34012 1.34012 1.34012 1.33947 1.33947 1.33976 1.33960 1.33860 1.33860 1.33860 1.34432 1.34414 1.34414 1.34414 1.34412 1.34412 1.34412 1.34412 1.34412 1.34413 1.34373	25.0  1.34173 1.34167 1.34159 1.34149 1.34129 1.34100 1.34074 1.34079 1.34079 1.34079 1.34079 1.34079 1.34070 1.34452 1.344310 1.344310 1.344310 1.344310 1.344310	1.34273 1.34266 1.34224 1.34224 1.34220 1.34205 1.34151 1.34151 1.34151 1.34090 1.34068 1.34040 1.34069 1.34068 1.34041 1.34071 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451 1.34451	1.34293 1.34284 1.34277 1.34266 1.34253 1.34227 1.34189 1.34100 1.34100 1.34100 1.34080 1.34080 1.34080 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34081 1.34483 1.34483 1.34483 1.34484 1.3448 1.34484 1.3448 1.34	32.0 1.34317 1.34395 1.34295 1.34285 1.34283 1.34293 1.34293 1.34293 1.34197 1.34108 1.34108 1.34080 1.34097 1.34494 1.34493 1.34493 1.34493 1.34493 1.34493 1.34494 1.34493 1.34494	33-0  1.34332 1.34325 1.34325 1.34316 1.34305 1.34242 1.34242 1.34245 1.34247 1.34167 1.34167 1.34167 1.34167 1.34172 1.34099 1.34073  43.0  1.34532 1.34523 1.345499 1.344499 1.344491 1.344491 1.34433 1.344414 1.34334
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 14.0 22.0 24.0 24.0 24.0 30.0	1.33674 1.33673 1.33660 1.33656 1.33656 1.33620 1.33573 1.33577 1.34577 1.3457	1.33774 1.33771 1.33761 1.33762 1.33731 1.33718 1.33718 1.33703 1.33686 1.33649 1.33649 1.33649 1.33649 1.33649 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365 1.34365	1.33873 1.33870 1.33865 1.33858 1.33828 1.33826 1.33812 1.33779 1.33761 1.33772 1.33772 1.33772 1.33772 1.33653	15.0 1.33973 1.33963 1.33965 1.33995 1.33995 1.33990 1.33870 1.33870 1.33870 1.33870 1.33769 1.33769 1.34412 1.34760 1.34404 1.3438	20.0 1.34073 1.34068 1.34061 1.34052 1.34052 1.34015 1.34015 1.34015 1.34010 1.33967 1.33967 1.33967 1.33967 1.33960 1.33684 1.33684 1.33684 1.33684 1.344362 1.344362 1.344368	25.0  1.34173 1.34147 1.34149 1.34149 1.34138 1.34125 1.34110 1.34077 1.34078 1.34039 1.34039 1.34039 1.34031 1.34421 1.34433 1.34421 1.34433 1.34421 1.34376 1.34378 1.34378 1.34378 1.34378 1.34378 1.34378 1.34378 1.34378	1.34273 1.34246 1.34234 1.34220 1.34236 1.34236 1.34151 1.34132 1.34151 1.34090 1.34068 1.34044 1.34019	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34220 1.34280 1.34180 1.34190 1.34106 1.34086 1.34087 1.34086 1.34087	32.0 1.34317 1.34305 1.34296 1.34293 1.34293 1.34294 1.34298 1.34298 1.34109 1.34109 1.34109 1.34109 1.34091	33.0  1. 34332 1. 34325 1. 34325 1. 34316 1. 34305 1. 34278 1. 34278 1. 34262 1. 34267 1. 34267 1. 34267 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34467 1. 34491 1. 34491 1. 34491 1. 34491 1. 34494 1. 34494 1. 34373
0.0 2.0 4.0 4.0 8.0 17.0 14.0 18.0 20.0 24.0 24.0 24.0 26.0 24.0 30.0	1.33674 1.33673 1.33664 1.33664 1.33636 1.33636 1.33673 1.33573 1.33573 1.33573 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.34361 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34270	1.33774 1.33771 1.33761 1.33752 1.33731 1.33718 1.33718 1.33708 1.3368 1.3368 1.3368 1.3368 1.3368 1.3368 1.33561 35.0 1.34372 1.34365 1.34351 1.54314 1.34363 1.34365 1.34365 1.34372 1.34365 1.34372 1.34365 1.34372 1.34365 1.34372 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363	1.33873 1.33870 1.33858 1.33859 1.33859 1.33872 1.33779 1.33761 1.33772 1.33772 1.33772 1.33653 30.0 1.34392 1.34384 1.34375 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353	15.0 1.33973 1.33969 1.33995 1.33995 1.33995 1.33920 1.33872 1.33872 1.33874 1.33814 1.33769 1.33769 1.34404 1.34404 1.34404 1.34404 1.34392	20-0 1.34073 1.34068 1.34061 1.34052 1.34042 1.34010 1.34010 1.34010 1.33943 1.33947 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.34412 1.34414 1.34414 1.34416 1.34416 1.34373 1.343717	25.0  1.34173 1.34167 1.34169 1.34189 1.34120 1.34094 1.34079 1.34079 1.34079 1.34039 1.34019 1.33978 1.33972  39.0  1.34452 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431	1.34273 1.34246 1.34224 1.34224 1.34220 1.34188 1.34171 1.34090 1.34088 1.34040 1.34090 1.34088 1.34040 1.34090 1.34000 1.34000 1.34000 1.34000 1.34000 1.34000 1.34000 1.3400	1.34293 1.34284 1.34277 1.34266 1.34253 1.342297 1.34189 1.34106 1.34106 1.34086 1.34087 1.34087 1.34408 1.34492 1.34493 1.34494 1.34493 1.34494 1.34494 1.34494 1.34396	32.0 1.34317 1.34305 1.34295 1.34295 1.34295 1.34296 1.34296 1.34296 1.34109 1.34109 1.34104 1.34080 1.34090 1.34404 1.34080 1.34404 1.34450 1.3450 1.	33-0  1.34332 1.34325 1.34325 1.34316 1.34292 1.34262 1.34262 1.34262 1.34267 1.34167 1.34167 1.34167 1.34172 1.34167 1.34172 1.34099 1.34073  43.0  1.34523 1.34512 1.34549 1.34549 1.34549 1.34533 1.34511 1.34373 1.34511 1.34373 1.34512 1.34533
0.0 2.0 4.0 4.0 8.0 17.0 14.0 14.0 18.0 22.0 24.0 24.0 26.0 30.0 0.0 17.0 4.0 4.0 6.0 19.	1.33674 1.33673 1.33669 1.33666 1.33659 1.33677 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.3470	1.33774 1.33771 1.33761 1.33752 1.33734 1.33718 1.33718 1.33718 1.33648 1.33648 1.33649 1.33649 1.33649 1.33649 1.33561 1.34365 1.3436 1.34	1.33873 1.33870 1.33865 1.33856 1.33889 1.33812 1.33779 1.33761 1.33772 1.33770 1.33771 1.33653 36.0 1.34392 1.24384 1.34375 1.34275 1	15.0 1.33973 1.33963 1.33995 1.33995 1.33990 1.33900 1.33890 1.33890 1.33890 1.33891 1.33891 1.33891 1.33769 1.3490 1.3	20.0 1.34073 1.34068 1.34061 1.34062 1.34062 1.34073 1.34080 1.34983 1.33967 1.33997 1.33997 1.33997 1.33960 1.33864 1.33860 1.33860 1.34432 1.34432 1.34432 1.34432 1.34432 1.34432 1.34368 1.34373 1.34373 1.34373 1.34373 1.34388 1.348888 1.34888 1.34888 1.34888 1.34888 1.34888 1.34888 1.348	25.0  1.34173 1.34147 1.34149 1.34149 1.34138 1.34125 1.34110 1.34077 1.34074 1.34077 1.34073 1.34019 1.33978 1.3452 1.33927 39.0  1.34452 1.34471 1.34378 1.34421 1.34378 1.34529 1.34278 1.34278 1.34278 1.34278 1.34223	1.34273 1.34246 1.34234 1.34234 1.34230 1.344231 1.344131 1.344131 1.34409 1.34044 1.34019	1.34293 1.34284 1.34277 1.34263 1.34253 1.34229 1.34224 1.34207 1.34189 1.34106 1.34136 1.34086 1.34086 1.34086 1.34086 1.34087 1.34106 1.34086 1.34086 1.34086 1.34086 1.34086 1.34086 1.34087 1.34483 1.34473 1.34486 1.3438	32.0 1.34317 1.34305 1.34296 1.34293 1.34293 1.34293 1.34293 1.34291 1.34104 1.34104 1.34104 1.34080 1.34091 1.34492 1.34493	33.0  1. 34332 1. 34325 1. 34325 1. 34316 1. 34305 1. 34227 1. 34227 1. 34227 1. 34227 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34167 1. 34467 1. 34491 1. 34491 1. 34491 1. 34491 1. 34491 1. 34491 1. 34491 1. 34373 1. 34414 1. 34373 1. 34414 1. 34373 1. 34430
0.0 2.0 4.0 4.0 8.0 17.0 14.0 18.0 20.0 24.0 24.0 24.0 26.0 24.0 30.0	1.33674 1.33673 1.33664 1.33664 1.33636 1.33636 1.33673 1.33573 1.33573 1.33573 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.33576 1.34361 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34271 1.34270	1.33774 1.33771 1.33761 1.33752 1.33731 1.33718 1.33718 1.33708 1.3368 1.3368 1.3368 1.3368 1.3368 1.3368 1.33561 35.0 1.34372 1.34365 1.34351 1.54314 1.34363 1.34365 1.34365 1.34372 1.34365 1.34372 1.34365 1.34372 1.34365 1.34372 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363 1.34363	1.33873 1.33870 1.33858 1.33859 1.33859 1.33872 1.33779 1.33761 1.33772 1.33772 1.33772 1.33653 30.0 1.34392 1.34384 1.34375 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353 1.34353	15.0 1.33973 1.33969 1.33995 1.33995 1.33995 1.33920 1.33872 1.33872 1.33874 1.33814 1.33769 1.33769 1.34404 1.34404 1.34404 1.34404 1.34392	20-0 1.34073 1.34068 1.34061 1.34052 1.34042 1.34010 1.34010 1.34010 1.33943 1.33947 1.33976 1.33976 1.33976 1.33976 1.33976 1.33976 1.34412 1.34414 1.34414 1.34416 1.34373 1.34371 1.34371 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280 1.34280	25.0  1.34173 1.34167 1.34169 1.34189 1.34120 1.34094 1.34079 1.34079 1.34079 1.34039 1.34019 1.33978 1.33972  39.0  1.34452 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431 1.34431	1.34273 1.34246 1.34224 1.34224 1.34220 1.34188 1.34171 1.34090 1.34088 1.34040 1.34090 1.34088 1.34040 1.34072 1.34451 1.34079 1.34451 1.34079 1.34451 1.34451 1.34538 1.34538 1.34538 1.34538 1.34538 1.34538 1.34538 1.34538	1.34293 1.34284 1.34277 1.34266 1.34253 1.342297 1.34189 1.34106 1.34106 1.34086 1.34087 1.34087 1.34408 1.34492 1.34493 1.34494 1.34493 1.34494 1.34494 1.34494 1.34396	32.0 1.34317 1.34305 1.34295 1.34295 1.34295 1.34296 1.34296 1.34296 1.34109 1.34109 1.34104 1.34080 1.34090 1.34404 1.34080 1.34404 1.34450 1.3450 1.	33-0  1.34332 1.34325 1.34325 1.34316 1.34292 1.34262 1.34262 1.34262 1.34267 1.34167 1.34167 1.34167 1.34172 1.34167 1.34172 1.34099 1.34073  43.0  1.34523 1.34512 1.34549 1.34549 1.34549 1.34533 1.34511 1.34373 1.34511 1.34373 1.34512 1.34533

Herensim albertus is secured as a consistency of the contract 
a di Production de la company de la comp

Table A-2. (cont)

					(8)			ſm	dYog]	λ = <b>532.8 nm</b>
TEMP					MITT (0,					
_	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0 2.3	1.33599	1.33696	1.33794	1.33897	1.33997	1.34097	1.34196	1.34216	1.34236	1.34256 1.34247
4.0	1.33594	1.33691	1.33789	1.33886	1.33704	1.34082	1.34179	1.34199	1.34210	1.34236
6.0 8.0	1.33589	1.33425	1.33702	1.33879	1.33976	1.34072	1.3416#	1.34100	1.34206	1.34227 1.34216
10.0	1.33573	1.33668	1.33764	1.33859	1.33954	1.34049	1.34145	1.34164	1.34183	1.34202
15.0	1.33562	1.33656	1.33751	1.33845	1.33940	1.34034	1.34129	1.34148	1-34164	1.34105
14.0 16.0	1.33549	1.33642	1.33737	1.33830	( .33924 1.33907	1.34018	1.34111	1.34130	1.34149	1.34168 1.34149
18.0	1.33516	1.33611	1.33704	1.33797	1.33869	1.33962	1.34075	1.34093	1.34112	1.34131
20.0	1.33501	:.33594	1.33444	1.33779	1.33871	1.33963	1.34055	1.34074	1.34093	1.34111 1.34690
22.0 24.0	1.33483	1.33575	1.33667	1.33759	1.33830	1.33922	1.34013	1.34032	1.34050	1.34068
26.0	1.33442	1.33533	1.33425	1.33716	1.33008	1.33899	1.33991	1.34007	1.34027	1.34045
28.0 30.0	1.33419	1.33510	1.33602	1.33693	1.3378	1.33876	1.33947	1.33905	1.34003	1.34021 1.33997
200										
	34.0	35.9	34.0	37.0	3#.0	39.0	40.0	41.0	42.0	43.0
0.0	1.34276	1.34295	1.34316	1.34335		1.34375	1.34395	1.34415	1.34435	1.34455
2.0 4.0	1.34267	1.34287	1.34307	1.34326	1.34746	1.34366	1.34365	1.34405	1.34425	1.34444 1.34433
6.0	1.34246	1.34200	1.34245	1.34304	1.34324	1.34343	1.34362	1.34382	1.34401	1.34420
8.0	1.34235	1.34254	1.34273	1.34292	1.34311	1.34331	1.34350	1.34369	1.34388	1.34407
10.0 12.0	1.34221	1.34240	1.34259	1.34278	1.34297 1.34280	1.34316	1.34335	1.34337	1.34373	1.34392 1.34375
14.0	1.34127	1.34205	1.34224	1.34243	1-34262	1-34280	1.34299	1.34318	1.34337	1.34355
16.0	1.34168	1.34187	1.34205	1.34224	1.34243	1.34261	1.34280	1.34299	1.34317	1.34336 1.34316
18.0 20.0	1.34149	1.34168	1.34186	1.34205	1.34223	1.34242	1.34240	1.34279	1.34278	1.34294
22.0	1.34109	1.54127	1.34146	1.3-164	1.34182	1.34201	1.34214	1.34230	1.34256	1.34274
24.0 26.0	1.34047	1.340+7	1.34124	1.34142	1.34160	1.34178	1.34197	1.34215	1.34234	1.34252 1.34228
20.0	1.34040			1.34095	1.34113	1.34131	1.34149	1.34168	1.34186	1.34204
30.0	1.34015	1.34033	1.34051	1.34070	1.340%8	1.34136	1.34124	1.34143	1.34161	1.34179
TEMP				SAI	(h)	/ <b>a</b> )			[Kr]	λ = <b>508.2</b> nm
TEMP °C	0.0	5.0	10.0	<b>SA</b> I	20.0 LDETT (0,	/ <b>m)</b>	30.0	31.0	[Nr]	λ = <b>505.2</b> nm
TEMP <sup>Q</sup> C 0.0			1.33662	15.0 1.33742	20.0 1.33 <b>0</b> 60	25.0	1.34057	1.34077	32.0 1.340%	33.0
0.0 2.0	1.33466	1.33565	1.33662	15.0 1.33742 1.33758	20.0 1.33860 1.33855	25.0 1.33958 1.33953	1.34057	1.34077	32.0 1.34096 1.34090	33.0 1.34117 1.34110
0.0 2.0 4.0	1.33466 1.33464 1.33461	1.33545 1.33562 1.33557	1.33662 1.33659 1.33654	15.0 1.33742 1.33758 1.33751	20.0 1.33860 1.33855 1.33849	25.0 1.33958 1.33953 1.33945	1.34057	1.34077	32.0 1.340%	33.0
0.0 2.0 4.0 5.0 8.0	1.33466 1.33464 1.33461 1.33454 1.33446	1.33565 1.33562 1.33557 1.33550 1.33541	1.33662 1.33659 1.33654 1.33646 1.33637	15.0 1.33742 1.33758 1.33751 1.33743 1.33732	20.0 1.33860 1.33855 1.33847 1.33839 1.33828	25.0 1.33958 1.33953 1.33945 1.33935 1.33923	1.34057 1.34051 1.34043 1.34032 1.34019	1.34077 1.34070 1.34062 1.34051 1.34038	32.0 1.34096 1.34090 1.34082 1.34070 1.34057	33.0 1.34117 1.34110 1.34101 1.34009
0.0 2.0 4.0 5.0 8.0 10.0	1.33466 1.33464 1.33461 1.33454 1.33446 1.33437	1.33565 1.33562 1.33557 1.33550 1.33541 1.33531	1.33662 1.33659 1.33654 1.33646 1.33637 1.33626	15.0 1.33742 1.33758 1.32751 1.33743 1.33732	20.0 20.0 1.33840 1.33849 1.33849 1.33828 1.33828	25.0 1.33958 1.33953 1.33945 1.33935 1.33923 1.33910	1.34057 1.34051 1.34043 1.34032 1.34019	1.34077 1.34070 1.34062 1.34051 1.34038	32.0 1.34096 3.34090 1.34042 1.34070 1.34057 1.34043	33.0 i.34117 1.34110 1.34101 1.34009 1.34076 1.34076
0.0 2.0 4.0 5.0 8.0	1.33466 1.33464 1.33461 1.33454 1.33446	1.33565 1.33562 1.33557 1.33550 1.33541	1.33662 1.33659 1.33654 1.33637 1.33626 1.33614 1.33600	15.0 1.33742 1.33758 1.33751 1.33743 1.33732	20.0 1.33860 1.33855 1.33847 1.33839 1.33828	25.0 1.33958 1.33953 1.33945 1.33935 1.33923	1.34057 1.34051 1.34043 1.34032 1.34019	1.34077 1.34070 1.34062 1.34051 1.34038	32.0 1.34096 1.34090 1.34082 1.34070 1.34057	33.0 1.34117 1.34110 1.34101 1.34089 1.34076 1.34062 1.34046 1.34040
0.0 2.0 4.0 5.0 8.0 10.0 12.0 14.0	1.33464 1.33464 1.33454 1.33454 1.33446 1.33437 1.33426 1.33414 1.33401	1.33565 1.33562 1.33557 1.33550 1.33541 1.33531 1.33520 1.33507 1.33493	1.33662 1.33659 1.33654 1.33637 1.33626 1.33614 1.33600 1.33586	15.0 1.33742 1.33758 1.32751 1.33743 1.33732 1.33721 1.33708 1.33694 1.33678	1.3360 1.3360 1.3365 1.3369 1.3369 1.3362 1.3362 1.3377	25.0 1.33958 1.33953 1.33945 1.33935 1.33923 1.33910 1.33884	1.34057 1.34051 1.34043 1.34032 1.34005 1.33990 1.33974 1.33957	1.34077 1.34070 1.34062 1.34051 1.34038 1.34024 1.34009 1.33993 1.33975	32.0 1.340% 1.340% 1.340% 1.340% 1.340% 1.340% 1.340% 1.340% 1.340%	33.0 1.34117 1.34110 1.34009 1.34009 1.34062 1.34046 1.34030 1.34030
0.0 2.0 4.0 5.0 8.0 10.0 12.0 14.0 16.0	1.33464 1.33464 1.33454 1.33454 1.3346 1.33426 1.33414 1.33401 1.33386	1-33545 1-33557 1-33550 1-33541 1-33531 1-33507 1-33493 1-33477	1.33662 1.33654 1.33654 1.33646 1.33626 1.33626 1.33600 1.33586 1.33570	15.0 1.33742 1.33758 1.32751 1.33743 1.33721 1.33708 1.33494 1.33678 1.336461	1.3360 1.3360 1.3365 1.3369 1.3369 1.3362 1.3362 1.3362 1.3377 1.33754	25.0 1.33998 1.33999 1.33949 1.33993 1.33910 1.33891 1.33844 1.33844	1.34057 1.34043 1.34043 1.34019 1.34005 1.33970 1.33977 1.33957	1.34077 1.34070 1.34062 1.34051 1.34038 1.34024 1.34009 1.33993 1.33975 1.33956	32.0 1.34096 1.34090 1.34070 1.34077 1.34057 1.34013 1.34011 1.33994	33.0 1.34117 1.34110 1.34089 1.34089 1.34062 1.34062 1.34064 1.34030 1.34030 1.34030
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0	1.33464 1.33464 1.33454 1.33454 1.33446 1.33401 1.33401 1.33386 1.33350	1.33565 1.33562 1.33557 1.33550 1.33561 1.33520 1.33520 1.33473 1.33473 1.33479	1.33662 1.33659 1.33654 1.33646 1.33637 1.33626 1.33614 1.33600 1.33570 1.33572	15.0 1.33742 1.33758 1.32751 1.33743 1.33732 1.33721 1.33694 1.33641 1.33642 1.33642	20.0 1.33860 1.33855 1.33859 1.33839 1.33838 1.33838 1.33872 1.33771 1.33774 1.33734 1.33735	25.0 1.33958 1.33953 1.33945 1.33945 1.33945 1.33910 1.33814 1.33844 1.33845 1.33824 1.33826	1.34057 1.34043 1.34043 1.34019 1.34005 1.33990 1.33974 1.33938 1.33918 1.33894	1.34077 1.34070 1.34062 1.34051 1.34034 1.34024 1.34009 1.33975 1.33956 1.33936 1.33936	32.0 1.34096 1.34090 1.34057 1.34057 1.34053 1.34027 1.34011 1.33994 1.33994 1.33993	33.0 1.34117 1.34110 1.34019 1.34076 1.34062 1.34046 1.34030 1.34030 1.34031 1.33973 1.33972
0.0 2.0 4.0 5.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0	1.33464 1.33461 1.33451 1.33454 1.33446 1.33417 1.33416 1.333401 1.33396 1.33350 1.33350	1.33545 1.33542 1.33557 1.33550 1.33551 1.33531 1.33520 1.33507 1.33477 1.33450 1.33440 1.33420	1.33662 1.33659 1.33654 1.33646 1.3367 1.33626 1.33616 1.33566 1.33570 1.33552 1.33532 1.33532	15.0 1.33742 1.33758 1.32751 1.33743 1.33772 1.33708 1.33494 1.33642 1.33642 1.33622 1.33602	20.0 1.33860 1.33855 1.33869 1.33829 1.33828 1.33815 1.33802 1.33771 1.33774 1.33754 1.33754 1.33754	25.0 1.33998 1.33953 1.33945 1.33935 1.33923 1.33910 1.33884 1.33884 1.33845 1.33845 1.33845 1.33845 1.33845	1.34057 1.34043 1.34043 1.34049 1.34005 1.33970 1.33974 1.33978 1.33918 1.33918 1.33894 1.33874	1.34077 1.34070 1.34052 1.34051 1.34034 1.34024 1.34009 1.33975 1.33975 1.33956 1.33915 1.33915	32.0 1.340% 1.340% 1.340% 1.34070 1.34057 1.34043 1.34043 1.34041 1.33994 1.33994 1.33993 1.33933 1.33931	33.0 1.34117 1.34110 1.34089 1.34089 1.34062 1.34062 1.34064 1.34030 1.34030 1.34030 1.33973 1.33972 1.33972
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0	1.33464 1.33464 1.33454 1.33454 1.33446 1.33401 1.33401 1.33386 1.33350	1.33565 1.33562 1.33557 1.33550 1.33561 1.33520 1.33520 1.33473 1.33473 1.33479	1.33662 1.33659 1.33654 1.33646 1.33637 1.33626 1.33614 1.33600 1.33570 1.33572	15.0 1.33742 1.33758 1.32751 1.33743 1.33732 1.33721 1.33694 1.33641 1.33642 1.33642	20.0 1.33860 1.33855 1.33859 1.33839 1.33838 1.33838 1.33872 1.33771 1.33774 1.33734 1.33735	25.0 1.33958 1.33959 1.33945 1.33945 1.33916 1.33816 1.33864 1.33865 1.33865 1.33865 1.33865 1.33865 1.33763 1.33763	1.34057 1.34043 1.34043 1.34019 1.34005 1.33990 1.33974 1.33938 1.33918 1.33894	1.34077 1.34070 1.34062 1.34051 1.34034 1.34024 1.34009 1.33975 1.33956 1.33936 1.33936	32.0 1.34096 1.34090 1.34057 1.34057 1.34053 1.34027 1.34011 1.33994 1.33994 1.33993	33.0 i.34117 i.34110 1.34009 1.34009 1.34062 1.34046 1.34030 1.34030 1.34030 1.34030 1.33972 1.33973 1.33971 1.33929 1.33907 1.33907
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 24.0	1.33466 1.33461 1.33451 1.33456 1.33457 1.33426 1.33416 1.333418 1.33358 1.33358 1.33358 1.33359	1.33545 1.33552 1.33550 1.33550 1.33541 1.33531 1.33520 1.33477 1.33459 1.33440 1.33420 1.333420	1.33662 1.33659 1.33654 1.33664 1.3367 1.33626 1.33614 1.33600 1.33586 1.33570 1.33552 1.33532 1.33512 1.33619	15.0 1.33742 1.33758 1.32751 1.33743 1.33721 1.33708 1.33694 1.33642 1.33642 1.33642 1.33622 1.33622 1.33580	LIMETY (0, 20.0 1.33860 1.33869 1.33839 1.33828 1.33815 1.33802 1.33771 1.33771 1.33771 1.33735 1.33735 1.33735 1.33670	25.0 1.33998 1.33995 1.33995 1.33995 1.33998 1.33994 1.33894 1.33845 1.33845 1.33845 1.33845 1.33845 1.33845 1.33845	1.34051 1.34043 1.34043 1.34019 1.34019 1.33970 1.33974 1.33958 1.33874 1.33874 1.33874	1.34077 1.34070 1.34052 1.34051 1.34034 1.34024 1.33093 1.33975 1.33993 1.33915 1.33893 1.33873 1.33873	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34011 1.33994 1.33994 1.33933 1.33911 1.33988	33.0 1.34117 1.34110 1.34009 1.34009 1.34074 1.34062 1.34062 1.34030 1.34012 1.33973 1.33973 1.33971 1.33929
0.0 2.0 4.0 5.0 8.0 10.0 12.0 14.0 16.0 16.0 20.0 22.0 24.0 24.0 26.0	1.33466 1.33464 1.33451 1.33456 1.33456 1.33466 1.33416 1.333416 1.33360 1.33350 1.33350 1.33329 1.33328	1.33545 1.33542 1.33557 1.33550 1.33551 1.33520 1.33507 1.33477 1.33479 1.33459 1.33450 1.33450 1.333470	1.33662 1.33659 1.33654 1.33664 1.33667 1.33660 1.33616 1.33570 1.33570 1.33572 1.33552 1.33532 1.33487	15.0 1.33742 1.33759 1.33743 1.33743 1.33708 1.33708 1.33694 1.33641 1.33642 1.33622 1.33602 1.33507	20.0 1.33860 1.33855 1.33849 1.33839 1.33838 1.33815 1.33802 1.33771 1.33774 1.33734 1.33734 1.33734 1.33734	25.0 1.33958 1.33959 1.33945 1.33945 1.33916 1.33816 1.33864 1.33865 1.33865 1.33865 1.33865 1.33865 1.33763 1.33763	1.34057 1.34051 1.34033 1.34032 1.34005 1.33970 1.33974 1.33978 1.33918 1.33874 1.33874 1.33874 1.33874	1.34077 1.34070 1.34052 1.34051 1.34034 1.34024 1.33093 1.33975 1.33993 1.33915 1.33893 1.33873 1.33873	32.0 1.34096 1.34090 1.34057 1.34057 1.34053 1.34053 1.34011 1.33994 1.33994 1.33993 1.33911 1.33888	33.0 i.34117 i.34110 1.34009 1.34009 1.34062 1.34046 1.34030 1.34030 1.34030 1.34030 1.33972 1.33973 1.33971 1.33929 1.33907 1.33907
0.0 2.0 4.0 8.0 10.0 12.0 14.0 14.0 20.0 22.0 24.0 28.0 30.0	1.33464 1.33464 1.33464 1.33456 1.33466 1.33426 1.33416 1.33386 1.33368 1.33350 1.33328 1.33286 1.33263	1.33545 1.33562 1.33550 1.33551 1.33551 1.33550 1.3357 1.33450 1.33477 1.33450 1.33450 1.33450 1.33353 35.0	1.33662 1.33659 1.33656 1.33666 1.3367 1.33626 1.33616 1.33590 1.33590 1.33592 1.33591 1.33591 1.33467 1.33467 1.33467	15.0 1.337A2 1.33759 1.33751 1.33743 1.33732 1.33708 1.33641 1.33642 1.33642 1.33642 1.33597 1.33597 1.33597	20.0 1.33860 1.33855 1.33859 1.33839 1.33839 1.33832 1.33832 1.33771 1.33774 1.33774 1.33774 1.33774 1.33774 1.33774 1.33677 1.33677 1.33647 1.33647	25.0 1.33958 1.33953 1.33945 1.33945 1.33945 1.33864 1.33864 1.33865 1.33865 1.33865 1.33763 1.33763 1.33763 1.33776 1.33776	1.34057 1.34051 1.34043 1.34019 1.34005 1.33970 1.33974 1.33978 1.33978 1.33874 1.33874 1.33874 1.33874 1.33874 1.33874 1.33874	1.34077 1.34070 1.34061 1.34038 1.34024 1.34009 1.33973 1.33975 1.33975 1.33973 1.33870 1.33870 1.33870 1.33870	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34027 1.34011 1.33994 1.33994 1.33993 1.33911 1.33885 -1.33841 42.0 1.34293	33.0  1.34117 1.34110 1.34019 1.34076 1.34062 1.34046 1.34030 1.34031 1.33973 1.33973 1.33973 1.33973 1.33951 1.33959 43.0 1.34314
0.0 2.0 4.0 8.0 10.0 14.0 14.0 14.0 20.0 22.0 24.0 28.0 30.0	1.33466 1.33464 1.33454 1.33456 1.33456 1.33466 1.33406 1.33366 1.33368 1.33329 1.33286 1.33286 1.33286 1.33286 1.33286	1.33545 1.33562 1.33557 1.33551 1.33551 1.33520 1.33507 1.33477 1.33459 1.33447 1.33440 1.33399 1.33377 1.33353	1.33662 1.33659 1.33654 1.33646 1.33626 1.33614 1.33600 1.33570 1.33552 1.33511 1.33489 1.33444 34.0	15.0 1.33742 1.33758 1.32751 1.33743 1.33721 1.33708 1.33641 1.33642 1.33642 1.3362 1.33602 1.33557 1.33534	20.0 1.33860 1.33869 1.33849 1.33828 1.33815 1.33828 1.33871 1.33771 1.33771 1.33771 1.33735 1.33735 1.33743 1.33647 1.33647 1.33647 1.33647 1.33647 1.33647	25.0 1.33998 1.33945 1.33945 1.33945 1.33916 1.33804 1.33845 1.33845 1.33845 1.33845 1.33845 1.33845 1.33845 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781	1.34057 1.34043 1.34043 1.34019 1.34019 1.33974 1.33974 1.33978 1.33918 1.33874 1.33874 1.33874 1.33875 1.33875 1.33875 1.33875 1.33874 1.33874 1.33874	1.34077 1.34070 1.34052 1.34051 1.34038 1.34024 1.34009 1.33973 1.33975 1.33956 1.33956 1.33873 1.33873 1.33823	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34043 1.34011 1.33994 1.33993 1.33981 1.33888 1.338841 42.0 1.34293 1.34286	33.0 1.34117 1.34110 1.34089 1.34089 1.34076 1.34046 1.34030 1.34030 1.34030 1.33973 1.33973 1.33972 1.33929 1.33929 1.33951 1.33929 1.33953 43.0 1.34314 1.34304
0.0 2.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 28.0 30.0	1.33464 1.33464 1.33464 1.33456 1.33466 1.33426 1.33416 1.33386 1.33368 1.33350 1.33328 1.33286 1.33263	1.33545 1.33562 1.33557 1.33551 1.33551 1.33520 1.33507 1.33477 1.33459 1.33447 1.33440 1.33399 1.33377 1.33353	1.33662 1.33659 1.33656 1.33666 1.3367 1.33626 1.33616 1.33590 1.33590 1.33592 1.33591 1.33591 1.33467 1.33467 1.33467	15.0 1.33742 1.33758 1.32751 1.33743 1.33721 1.33708 1.33642 1.33642 1.33622 1.33622 1.33537 1.33534	20.0 1.33860 1.33855 1.33859 1.33839 1.33839 1.33832 1.33832 1.33771 1.33774 1.33774 1.33774 1.33774 1.33774 1.33774 1.33677 1.33677 1.33647 1.33647	25.0 1.33958 1.33953 1.33945 1.33945 1.33945 1.33864 1.33864 1.33865 1.33865 1.33865 1.33763 1.33763 1.33763 1.33776 1.33776	1.34057 1.34051 1.34043 1.34019 1.34005 1.33970 1.33974 1.33978 1.33978 1.33874 1.33874 1.33874 1.33874 1.33874 1.33874 1.33874	1.34077 1.34070 1.34061 1.34038 1.34024 1.34009 1.33973 1.33975 1.33975 1.33973 1.33870 1.33870 1.33870 1.33870	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34027 1.34011 1.33994 1.33994 1.33993 1.33911 1.33885 -1.33841 42.0 1.34293	33.0  1.34117 1.34110 1.34019 1.34076 1.34062 1.34046 1.34030 1.34031 1.33973 1.33973 1.33973 1.33973 1.33951 1.33959 43.0 1.34314
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0.0 2.0 4.0 8.0 10.0 12.0 14.0 14.0 20.0 22.0 24.0 28.0 30.0 0.0 10.0 10.0 11.0 10.0 11.0 11.	1.33464 1.33464 1.33464 1.33454 1.33466 1.33416 1.33408 1.33376 1.33368 1.33350 34.0 1.34136 1.34136 1.34120 1.34120 1.34120 1.34120 1.34120 1.34109 1.34080 1	1.33545 1.33550 1.33550 1.33551 1.33550 1.33550 1.33570 1.33459 1.33459 1.33450 1.33450 1.33450 1.33450 1.34156 1.34156 1.34140 1.34128 1.34140 1.34140 1.34040 1.34040 1.34003 1.34004 1.34003 1.34004	1.33662 1.33659 1.33656 1.33666 1.33616 1.33616 1.33570 1.33552 1.33552 1.33551 1.33467 1.33446 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.3417	15.0  1.337A2 1.33759 1.33751 1.33732 1.33708 1.33641 1.33642 1.33622 1.33622 1.33557 1.33557 1.34188 1.34167 1.34188 1.34167 1.34194 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196	20.0 1.33860 1.33865 1.33867 1.33869 1.33828 1.33812 1.33871 1.33774 1.33774 1.33774 1.33624 38.0 1.34214 1.34207 1.34218 1.34186	25.0  1.33998 1.33953 1.33945 1.33991 1.33981 1.33981 1.33884 1.33885 1.33781 1.33781 1.33781 1.34217 1.34217 1.34205 1.34170	1.34057 1.34051 1.34003 1.34003 1.34001 1.33970 1.33974 1.33978 1.33978 1.33874 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.33872 1.34127 1.34127 1.34140 1.34177 1.34140 1.34177 1.34140 1.34177	1.34077 1.34070 1.34065 1.34024 1.34029 1.33973 1.33975 1.33975 1.33976 1.33976 1.33877 1.33877 1.33873 1.34140 1.34174 1.34174 1.34174 1.34174 1.34174 1.34174 1.34174	32.0  1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34027 1.34011 1.33994 1.33993 1.33911 1.33983 1.33911 1.33885 1.33881 42.0 1.34293 1.34286 1.34293 1.34281 1.34293	33.0  i.34117 i.34110 1.34010 1.34029 1.34076 1.34046 1.34030 1.34030 1.34030 1.34030 1.34030 1.33972 1.33971 1.33929 1.33951 1.33929 1.33963 1.34030 1.34216 1.34216 1.34216 1.34217 1.34177 1.34156 1.3417
0.0 2.0 4.0 8.0 10.0 14.0 14.0 14.0 20.0 22.0 24.0 28.0 30.0	1.33466 1.33461 1.33466 1.33466 1.33466 1.33461 1.33461 1.33366 1.33368 1.33368 1.33368 1.33263 34.0 1.34136 1.34129 1.34129 1.34120 1.34120 1.34120 1.34080 1.34080 1.34081	1.33545 1.33562 1.33557 1.33550 1.33551 1.33550 1.33550 1.33457 1.33459 1.33447 1.33440 1.33440 1.33459 1.33377 1.33353 35.0 1.34156 1.34149 1.34140 1.34140 1.34140 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030 1.34030	1.33662 1.33659 1.33654 1.33646 1.33626 1.33614 1.33600 1.33552 1.33570 1.33552 1.33511 1.33489 1.33447 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34184 1.34184 1.34184 1.34184 1.34184 1.34184 1.34184 1.34184 1.34084 1.34084 1.34084 1.34088 1.3408 1.34088 1.34088 1.34088 1.34088 1.34088 1.34088 1.34088 1.3408	15.0  1.33742 1.33758 1.33743 1.33772 1.33778 1.33691 1.33661 1.33662 1.33662 1.33590 1.33591 1.33591 1.34194 1.34197 1.34197 1.34197 1.34197 1.34197 1.34197 1.34197 1.34197	20.0  1.33860 1.33869 1.33828 1.33828 1.33828 1.33875 1.33771 1.33775 1.33774 1.33677 1.33647 1.33647 1.33647 1.34166 1.34168 1.34085 1.34085 1.34086	25.0  1.33998 1.33995 1.33995 1.33995 1.33998 1.33996 1.33896 1.33806 1.33806 1.33807 1.33701 1.33701 1.33771 39.0 1.34205 1.34217 1.34217 1.34217 1.34217 1.34217 1.34217 1.34217 1.342110 1.34103 1.34083 1.34083 1.34083	1.34057 1.34051 1.34003 1.34003 1.34009 1.33970 1.33974 1.33978 1.33978 1.33874 1.33874 1.33874 1.33872 1.33875 1.3405 1.34171 1.34177 1.34238 1.34270 1.34177 1.34160 1.34177 1.34160 1.34171 1.34177 1.34177 1.34177 1.34177	1.34077 1.34070 1.34082 1.34038 1.34024 1.34009 1.33993 1.33975 1.33956 1.33897 1.33823 41.0 1.34274 1.34266 1.34229 1.34213 1.34274 1.34266 1.34229 1.34211 1.34160 1.34119 1.34074	32.0  1.34090 1.34092 1.34070 1.34053 1.34053 1.34053 1.33994 1.33994 1.33994 1.33994 1.33994 1.33986 1.33881	33.0  1.34117 1.34110 1.34089 1.34076 1.34062 1.34062 1.34030 1.34030 1.34031 1.33972 1.33973 1.33972 1.33953 1.33959  43.0  1.34314 1.34304 1.34267 1.34267 1.3427 1.3427 1.3427 1.3427 1.34287 1.3427 1.34287
0.0 2.0 4.0 8.0 10.0 12.0 14.0 14.0 20.0 22.0 24.0 28.0 30.0 0.0 10.0 10.0 11.0 10.0 11.0 11.	1.33464 1.33464 1.33464 1.33454 1.33466 1.33416 1.33408 1.33376 1.33368 1.33350 34.0 1.34136 1.34136 1.34120 1.34120 1.34120 1.34120 1.34120 1.34109 1.34080 1	1.33545 1.33562 1.33557 1.33551 1.33551 1.33520 1.33507 1.33493 1.33490 1.33440 1.33440 1.33399 1.33377 1.33353 35.0 1.34156 1.34149 1.34149 1.34149 1.34149 1.34149 1.34039 1.34039 1.34039 1.34039 1.34009 1.34039 1.34039 1.33942	1.33662 1.33659 1.33656 1.33666 1.33616 1.33616 1.33570 1.33552 1.33552 1.33551 1.33467 1.33446 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.3417	15.0  1.337A2 1.33759 1.33751 1.33732 1.33708 1.33641 1.33642 1.33622 1.33622 1.33557 1.33557 1.34188 1.34167 1.34188 1.34167 1.34194 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196 1.34196	20.0 1.33860 1.33865 1.33867 1.33869 1.33828 1.33812 1.33871 1.33774 1.33774 1.33774 1.33624 38.0 1.34214 1.34207 1.34218 1.34186	25.0  1.33998 1.33953 1.33945 1.33923 1.33916 1.33896 1.33881 1.33881 1.33881 1.33781 1.33781 1.33781 1.34191 1.34217	1.34057 1.34051 1.34003 1.34019 1.34005 1.33970 1.33974 1.33938 1.33918 1.33874 1.33874 1.33872 1.33875 1.33875 1.33875 1.33875 1.33875 1.34277 1.34271 1.34277 1.34271 1.34177 1.34140 1.34177 1.34140 1.34177 1.34140 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160	1.34077 1.34070 1.34070 1.34082 1.34024 1.34009 1.33973 1.33975 1.33975 1.33877 1.33823  41.0 1.34274 1.34264 1.34274 1.34077	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34027 1.34011 1.33994 1.33993 1.33911 1.33983 1.33911 1.33885 1.33885 1.33881 42.0 1.34293 1.34284 1.34293 1.34281 1.34293 1.34281 1.34293 1.34281 1.34293 1.34281 1.34293	33.0  i.34117 i.34110 1.34010 1.34029 1.34076 1.34046 1.34030 1.34030 1.34030 1.34030 1.34030 1.33972 1.33971 1.33929 1.33951 1.33929 1.33951 1.33929 1.33963 1.34216 1.34216 1.34216 1.34216 1.34216 1.34217 1.34177 1.34156 1.34171 1.34048 1.34048
0.0 2.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 24.0 24.0 28.0 30.0 0.0 2.0 4.0 6.0 30.0 10.0 12.0 10.0 12.0 10.0 10.0 20	1.33466 1.33461 1.33454 1.33456 1.33466 1.33461 1.33408 1.33376 1.33376 1.33376 1.33326 1.33263 1.33263 1.33263 1.33263 1.34129 1.34120 1.33967 1.33967 1.33967 1.33967 1.33967 1.33967	1.33545 1.33562 1.33557 1.33551 1.33551 1.33520 1.33507 1.33493 1.33490 1.33440 1.33440 1.33399 1.33377 1.33353 35.0 1.34156 1.34149 1.34149 1.34149 1.34149 1.34149 1.34039 1.34039 1.34039 1.34039 1.34009 1.34039 1.34039 1.33942	1.33662 1.33659 1.33656 1.33646 1.33626 1.33626 1.33560 1.33570 1.33552 1.33552 1.33551 1.33467 1.33444 36.0 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1.34168 1.34175 1	15.0  1.33742 1.33758 1.33758 1.337743 1.33773 1.33778 1.33694 1.33641 1.33662 1.33662 1.33662 1.33567 1.33597 1.34196 1.34197	1.3360 1.3360 1.3369 1.3369 1.3369 1.3382 1.33815 1.3382 1.3377 1.3377 1.3377 1.3377 1.3377 1.3377 1.3377 1.3375 1.3371 1.3367 1.3407 1.3416 1.3406 1	25.0  1.33998 1.33953 1.33945 1.33923 1.33916 1.33896 1.33881 1.33881 1.33881 1.33781 1.33781 1.33781 1.34191 1.34217	1.34057 1.34051 1.34003 1.34019 1.34005 1.33970 1.33974 1.33938 1.33918 1.33874 1.33874 1.33872 1.33875 1.33875 1.33875 1.33875 1.33875 1.34277 1.34271 1.34277 1.34271 1.34177 1.34140 1.34177 1.34140 1.34177 1.34140 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160 1.34177 1.34160	1.34077 1.34070 1.34052 1.34051 1.34038 1.34024 1.34009 1.33993 1.33975 1.33958 1.33873 1.33873 1.33823 41.0 1.34274 1.34264 1.34274	32.0 1.34096 1.34090 1.34082 1.34070 1.34057 1.34043 1.34027 1.34011 1.33994 1.33993 1.33911 1.33983 1.33911 1.33885 1.33885 1.33881 42.0 1.34293 1.34284 1.34293 1.34281 1.34293 1.34281 1.34293 1.34281 1.34293 1.34281 1.34293	33.0  i.34117 i.34110 1.34010 1.34029 1.34076 1.34046 1.34030 1.34030 1.34030 1.34030 1.34030 1.33972 1.33971 1.33929 1.33951 1.33929 1.33951 1.33929 1.33963 1.34216 1.34216 1.34216 1.34216 1.34216 1.34217 1.34177 1.34156 1.34171 1.34048 1.34048

Elicabeth de la comparation de la comp

Table A-2. (cont)

					(i)			ſı	HeNe ]	λ = <b>632.8</b> nm
TEMP			•••		LINETY (e			<del></del>	32.0	33.0
	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0		1.33916
0.0 2.0	1.33271	1.33368	1.33467	1.33565	1.33643	1.33741	1.33858	1.33878	1.33696	1.33910
4.0	1.33245	1.33362	1.33458	1.33>>+	1.33651	1.33747	1.33844	1.33863	1.33062	1.33901
4.0	1.33260	1.33356	1.33451	1.33546	1.33642	1.33737	1.33433	1.33852	1.33871	1.33890
8.0 10.0	1.33253	1.33340	1.33442	1.33537	1.33632	1.33726	1.33021	1.33840	1.33859	1.33878 1.33864
12.0	1.33234	1.33327	1,33420	1-33513	1.33606	1.33699	1.33792	1.33811	1.33830	1.33048
14.0	1.33222	1.33314	1.33406	1.33495	1.33591	1.33683	1.33776	1.33794	1.33413	1.33031
16.0	1.33200	1.33300	1.33391	1.33483	1.33575 1.33557	1.33646	1.33750	1.33774 1.33758	1-33795	1.33013 1.33794
18.0 20.0	1.33193	1.33284	1.33357	1.33444	1.33536	1.33629	1.33720	1.33738	1.33756	1.33774
22.0	1.33157	1.33247	1.33337	1.33428	1.33514	1.3360#	1.33699	1.33716	1.33735	1.33753
24.0	1.33137	1.33227	1.33317	1.33407	1.33497	1.33567	1.33677	1.33694	1.33712	1.33731
26.0 28.0	1.33116	1.33206	1.33275	1.33385	1.33475	1.33544	1.33654	1.33672	1.33690	1.33708
30.0	1.33071	1.33160	1. 33249	1.33337	1.33428	1.33517	1.33606	1.33624	1.33642	1.33460
	34.0	35.0	36.0	37.0	36.0	39.0	40.0	41.0	42.0	43.0
0.0	1.33937	1.33957	1.33974	1.33996	1.34016	1.34035	1.34055	1.34075	1.34094	1.34114
2.0 4.0	1.33930	1.33949	1.33968	1.33900	1.34007	1.34027	1.34046	1.34066	1.34085	1.34105
6.0	1.33910	1.33929	1.33948	1.33967	1.33986	1.34005	1.34024	1.34043	1.34063	1.34082
8.0	1.33897	1.33914	1.33935	1.33954	1.33973	1.33992	1.34011	1.34030	1.34049	1.34068
10.0	1.33+03	1.33502	1.33921	1.33939	1.33958	1.33977	1.33996	1.34015	1.34033	1.34052 1.34035
12.0 14.0	1.33867	1.33886 1.3386H	1.33904 1.33687	1.33923	1.33942	1.33960	1.33961	1.33979	1.34016	1.34016
16.0	1.33831	1.33750	1.33868	1.33447	1.33405	1.33923	1.33942	1.33960	1.3:978	1.33996
15.0	1.33017	1.33830	1.33849	1.33867	1.3388:	1.33904	1.33922	1.33940	1.33958	1.33976
20.0 22.0	1.33792	1.33810	1.33429	1.33846	1.33863	1.3380	1.33901	1.33919	1.33937	1.33955
24.0	1.33771	1.33767	1.33K07 1.337#5	1.33825	1.33821	1.33838	1.33856	1.33875	1.33915	1.33910
26.0	1.33776	1.33744	1.33762	1.33779	1.33797	1.33815	1.33833	1.33851	1.33869	1.33087
28.0	1.33702	1.33720	1.33734	1-33756	1.33774	1.33791	1.33809	1.33627	1.33845	1.33063
30.0	1.33674	1.33676	1. 33714	1.33731	1.33744	1.33767	1.33745	1.33803	1.33820	1.33836
TEMP	•			SA	(j) LDGTY (c	<b>(-)</b>			[Kr]	λ = <b>647.1</b> mm
OC TEMP	0.0	5.0	10.0		(j) LIMITY (• 20.0	/ <b>m</b> )	30.0	31.0	[Kr]	λ = <b>647.1</b> mm
oc				15.0	20 <b>.</b> 0	25.0			32.0	33.0
o.o	1.33233	1.33331	1.33429	15.0 1.33527	LIMITY (0 20.0 1.33625	25.0 1.33723	1.33821	1.33840	32.0	33.0 1.33879
oc				15.0	20 <b>.</b> 0	25.0			32.0	33.0
0.0 2.0 4.0 0.0	1.33233 1.33231 1.3322# 1.33222	1.33331 1.33329 1.33324 1.33318	1.33429 1.33426 1.33420 1.33413	15.0 1.33527 1.33523 1.33517 1.33509	20.0 20.0 1.33625 1.33620 1.33613 1.33604	25.0 1.33723 1.33717 1.33709 1.33700	1.33821 1.33814 1.33805 1.33795	1.33840 1.33833 1.33825 1.33814	32.0 1.33860 1.33853 1.33844 1.33633	33.0 1.33879 1.33872 1.33863 1.33852
0.0 2.0 4.0 6.0 8.0	1.33233 1.33231 1.3322# 1.33222 1.33215	1.33331 1.33329 1.33324 1.33318 1.33310	1.33429 1.33426 1.33420 1.33413 1.33404	15.0 1.33527 1.33523 1.33517 1.33509 1.33499	20.0 1.33625 1.33620 1.33613 1.33604 1.33593	25.0 1.33725 1.33717 1.33709 1.33700 1.33688	1.33821 1.33814 1.33805 1.33795 1.33783	1.33840 1.33833 1.33825 1.33814 1.33802	32.0 1.33860 1.33453 1.33844 1.33831	33.0 1.33879 1.33872 1.33863 1.33852 1.33840
0.9 2.0 4.0 6.0 8.0 10.0	1.33233 1.33231 1.3322# 1.33222 1.33215 1.33206	1.33331 1.33329 1.33324 1.33318 1.33310 1.33300	1.33429 1.33426 1.33420 1.33413 1.33404	15.0 1.33527 1.33523 1.33517 1.33509 1.33499 1.33448	20.0 20.0 1.33625 1.33620 1.33613 1.33604 1.33593 1.33582	25.0 1.33723 1.33717 1.33709 1.33700 1.33688 1.33676	1.33821 1.33814 1.33805 1.33795 1.33783 1.33769	1.33840 1.33833 1.33825 1.33814 1.33802 1.33788	32.0 1.33860 1.33853 1.33844 1.33821 1.33821	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33826
0.0 2.0 4.0 6.0 8.0 1C.0 12.0	1.33233 1.33231 1.33222 1.33222 1.33215 1.33206 1.33194 1.33184	1.33331 1.33329 1.33324 1.33318 1.33310 1.33300 1.33289 1.33276	1.33429 1.33426 1.33420 1.33413 1.33404 1.33394 1.33369	15.0 1.33527 1.33523 1.33517 1.33509 1.33499 1.33448 1.33475 1.33461	20.0 1.33625 1.33620 1.33613 1.33604 1.33593 1.33568 1.33554	25.0 1.33725 1.33717 1.33709 1.33688 1.33661 1.33661	1.33821 1.33814 1.33805 1.33795 1.33783 1.33769 1.33754	1.33840 1.33833 1.33825 1.33812 1.33802 1.33788 1.33773 1.33757	32.0 1.33660 1.33653 1.33644 1.33637 1.33821 1.33792 1.33775	33.0 1.33879 1.33872 1.33863 1.33852 1.33840
0.9 2.0 4.0 6.0 8.0 1C.0 12.0 14.0	1.33233 1.33231 1.33224 1.33225 1.33215 1.33206 1.33104 1.33164 1.33170	1.33331 1.33329 1.33324 1.33316 1.33310 1.33300 1.33289 1.33276 1.33262	1.33429 1.33426 1.33420 1.33413 1.33404 1.33372 1.33359	15.0 1.33527 1.33523 1.33517 1.33509 1.33449 1.33448 1.33445	LINETY (0 20.0 1.33625 1.33620 1.33613 1.33604 1.33593 1.33584 1.33554 1.33554	25.0 1.33723 1.33717 1.33709 1.33700 1.33688 1.33676 1.33646 1.33646 1.33646	1.33821 1.33814 1.33805 1.33783 1.33769 1.33754 1.33738 1.33738	1.33840 1.33833 1.33825 1.33814 1.33802 1.33788 1.33773 1.33757	32.0 1.33860 1.33853 1.33844 1.3383 1.33821 1.33807 1.33772 1.33775	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33810 1.33793 1.33775
0.0 2.0 4.0 6.0 10.0 12.0 14.0 16.0	1.33233 1.33234 1.33224 1.33222 1.33215 1.33206 1.33104 1.33104 1.33170 1.33154	1.33331 1.33329 1.33324 1.33318 1.33310 1.33289 1.33276 1.33276 1.33262	1.33429 1.33426 1.33420 1.33413 1.33404 1.33394 1.33369 1.33353 1.333337	15.0 1.33527 1.33523 1.33517 1.33509 1.33499 1.33475 1.33445 1.33445	20.0 1.33625 1.33620 1.33613 1.33604 1.33563 1.33564 1.33554 1.33554 1.33554	25.0 1.33725 1.33717 1.33709 1.33709 1.3368 1.33676 1.33646 1.33646 1.33678	1.33821 1.33814 1.33805 1.33795 1.33769 1.33769 1.33738 1.33738 1.33720 1.33702	1.33840 1.33833 1.3382> 1.33814 1.33802 1.33788 1.33773 1.33757 1.33739	32.0 1.33860 1.33853 1.33844 1.33831 1.33821 1.33772 1.33775 1.33757	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33826 1.33810 1.33793 1.33775 1.33775
0.9 2.0 4.0 6.0 8.0 1C.0 12.0 14.0	1.33233 1.3322w 1.3322w 1.3322z 1.33215 1.3320 1.3310w 1.3316w 1.3315 1.33137 1.33117	1.33331 1.33329 1.33324 1.33310 1.33310 1.333289 1.33276 1.33262 1.33262 1.33268 1.33268	1.33429 1.33426 1.33420 1.33413 1.33404 1.33392 1.33369 1.33353 1.33331 1.33299	15.0 1.33527 1.33523 1.33517 1.33509 1.33449 1.33441 1.33445 1.33445 1.33428 1.33409 1.33390	LIMITY (0 20.0 1.33625 1.33620 1.33613 1.33504 1.33592 1.33584 1.33554 1.33557 1.33515 1.33500 1.33480	25.0 1.33723 1.33717 1.33709 1.33700 1.33688 1.33676 1.33646 1.33646 1.33646	1.33821 1.33814 1.33805 1.33783 1.33769 1.33754 1.33738 1.33738	1.33840 1.33833 1.33825 1.33814 1.33802 1.33783 1.33757 1.33739 1.33720 1.33700 1.33679	32.0 1.33860 1.33853 1.33844 1.3383 1.33821 1.33807 1.33772 1.33775	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33810 1.33793 1.33775
0-0 2-0 4-0 6-0 8-0 12-0 14-0 16-0 16-0 22-0 24-0	1.33233 1.33234 1.33224 1.33222 1.33206 1.33104 1.33170 1.33154 1.33317 1.33119	1.33331 1.33329 1.33324 1.33318 1.33300 1.33289 1.33276 1.33262 1.33262 1.33264 1.33728	1.33429 1.33420 1.33413 1.33403 1.33394 1.33394 1.33353 1.33353 1.33299 1.33279	15.0 1.33527 1.33523 1.33517 1.33509 1.33448 1.33475 1.33445 1.33445 1.33409 1.33300 1.33300	LIBITY (0 20.0 1.33625 1.33603 1.33604 1.33593 1.335942 1.33554 1.33554 1.33557 1.33551 1.33500 1.33480 1.33480	25.0 1.33723 1.33717 1.33709 1.33709 1.33846 1.33646 1.33646 1.33646 1.33646 1.33646 1.33570 1.33570 1.33570	1.33821 1.33814 1.33805 1.33795 1.33789 1.33754 1.33738 1.33720 1.33702 1.33602 1.33601 1.33639	1.33840 1.33832 1.33814 1.33814 1.33778 1.33773 1.33757 1.33759 1.33769 1.33769 1.33567	32.0 1.33860 1.33853 1.33843 1.33827 1.33792 1.33775 1.33775 1.33738 1.33738 1.33675	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33826 1.33810 1.33775 1.33775 1.33775 1.33776 1.33736 1.33715 1.33715
0.0 2.0 4.0 8.0 1C.0 12.0 14.0 16.0 20.0 22.0 24.0 26.0	1.33233 1.33234 1.33224 1.33222 1.33216 1.33206 1.33194 1.3317 1.33154 1.33157 1.33100 1.33007	1.33331 1.33329 1.33324 1.33318 1.33300 1.33276 1.33276 1.33276 1.3326 1.3326 1.3326 1.3326 1.3326	1.33429 1.33426 1.33420 1.33413 1.33404 1.33394 1.33359 1.33353 1.33359 1.33279 1.33279 1.33279	15.0 1.33527 1.33523 1.33517 1.33549 1.33449 1.33441 1.33445 1.33445 1.33409 1.33309 1.33390 1.33348	LIMITY (0 20.0 1.33625 1.33620 1.33613 1.33604 1.33543 1.33542 1.33554 1.33557 1.33537 1.33530 1.33450 1.33450	25.0 1.33723 1.33717 1.33709 1.33881 1.33661 1.33646 1.33646 1.33646 1.33646 1.33570 1.33570 1.33570 1.33570	1.33821 1.33814 1.33805 1.33795 1.33789 1.33769 1.33738 1.33702 1.33702 1.33621 1.3361	1.33840 1.33843 1.33822 1.33814 1.33802 1.33788 1.33773 1.33757 1.33720 1.33720 1.33679 1.33679	32.0 1.33660 1.33653 1.33641 1.33633 1.33621 1.33792 1.33775 1.33775 1.33738 1.33718 1.33675 1.33675 1.33675	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33826 1.33810 1.33775 1.33775 1.33775 1.33775 1.33736 1.33715 1.33670
0-0 2-0 4-0 6-0 8-0 12-0 14-0 16-0 16-0 22-0 24-0	1.33233 1.33234 1.33224 1.33222 1.33206 1.33104 1.33170 1.33154 1.33317 1.33119	1.33331 1.33329 1.33324 1.33318 1.33300 1.33289 1.33276 1.33262 1.33262 1.33264 1.33728	1.33429 1.33420 1.33413 1.33404 1.33394 1.33359 1.33353 1.333319 1.33299 1.33298 1.33298 1.33298	15.0 1.33527 1.33523 1.33517 1.33509 1.33448 1.33475 1.33445 1.33445 1.33409 1.33300 1.33300	LIMITY (0 20.0 1.33625 1.33625 1.33613 1.33601 1.33504 1.33504 1.33554 1.33554 1.33551 1.33500 1.33450 1.33450 1.33457 1.33451	25.0 1.33723 1.33717 1.33709 1.33709 1.33846 1.33646 1.33646 1.33646 1.33646 1.33646 1.33570 1.33570 1.33570	1.33821 1.33814 1.33805 1.33795 1.33789 1.33754 1.33738 1.33720 1.33702 1.33602 1.33601 1.33639	1.33840 1.33833 1.33822 1.33842 1.33802 1.33778 1.33757 1.33759 1.33720 1.33720 1.33657 1.33657 1.33634 1.33610	32.0 1.33860 1.33853 1.33843 1.33827 1.33792 1.33775 1.33775 1.33738 1.33738 1.33675	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33826 1.33810 1.33775 1.33775 1.33775 1.33776 1.33736 1.33715 1.33715
0-9 2-0 4-0 8-0 1C-0 12-0 14-0 16-0 20-0 22-0 24-0 28-0	1.33233 1.33231 1.3322w 1.3322z 1.33215 1.33206 1.33104 1.33104 1.33157 1.33119 1.33107 1.33107 1.33107	1.33331 1.33329 1.33324 1.33310 1.33300 1.33276 1.33276 1.33262 1.33262 1.33268 1.33268 1.33146	1.33429 1.33420 1.33413 1.33404 1.33394 1.33359 1.33353 1.333319 1.33299 1.33298 1.33298 1.33298	15.0 1.33527 1.33523 1.33517 1.33509 1.33495 1.33475 1.33445 1.33405 1.33405 1.33390 1.33398 1.33388 1.33325	LIMITY (0 20.0 1.33625 1.33625 1.33613 1.33601 1.33504 1.33504 1.33554 1.33554 1.33551 1.33500 1.33450 1.33450 1.33457 1.33451	25.0 1.33723 1.33717 1.33709 1.33684 1.33646 1.33646 1.33691 1.33591 1.33570 1.33591 1.33570 1.33526 1.33526	1.33821 1.33814 1.33805 1.33793 1.33769 1.33738 1.33738 1.33738 1.33720 1.33502 1.33601 1.33630 1.33630	1.33840 1.33833 1.33822 1.33842 1.33802 1.33778 1.33757 1.33759 1.33720 1.33720 1.33657 1.33657 1.33634 1.33610	32.0 1.33860 1.33853 1.33824 1.33821 1.33807 1.33775 1.33757 1.33757 1.33757 1.33757 1.33757 1.33675 1.33697 1.33697	33.0 1.33879 1.33872 1.33863 1.33852 1.33840 1.33840 1.33775 1.33775 1.33775 1.33775 1.33775 1.33715 1.33715 1.33646
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0.0 2.0 4.0 8.0 12.0 12.0 14.0 16.0 22.0 24.0 24.0 28.0 30.0	1.33273 1.332231 1.332231 1.33222 1.33215 1.33206 1.33194 1.33154 1.33154 1.33154 1.33157 1.33077 1.33077 1.33092 1.33892 1.33892 1.33871 1.33892 1.33871 1.33754 1.33754 1.33774 1.33774 1.33773 1.33773	1.3331 1.3329 1.3329 1.33310 1.33209 1.33276 1.33276 1.33269 1.3326 1.3326 1.3326 1.3316 1.3316 1.3316 1.3316 1.3316 1.3316 1.3316 1.3391 1.3391 1.3390 1.3363 1.3363 1.3363 1.3372 1.3372 1.3372 1.3372 1.3372 1.3372 1.3372 1.3372 1.3372 1.3372	1.33-29 1.33-20 1.33-20 1.33-13 1.33-04 1.33-39 1.33-37 1.33-37-1 1.33-29 1.33	15.0  1.33>27 1.33>23 1.33519 1.33549 1.3349 1.3345 1.33465 1.33490 1.33390 1.33390 1.33390 1.333940 1.33958 1.33859 1.33859 1.33859 1.33859 1.33859 1.33859 1.33758	LINETY (0 20.0  1.33625 1.33620 1.33613 1.33563 1.33564 1.33564 1.33567 1.33530 1.33457 1.33414 1.33978 1.33782 1.33782	25.0  1.33723 1.33771 1.33700 1.33841 1.33676 1.33641 1.33673 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33987 1.33987 1.33988 1.33998 1.33998 1.33998 1.33988 1.33988 1.33865 1.33865 1.33865 1.33865 1.33865	1.33821 1.33814 1.33905 1.33783 1.33769 1.33738 1.33760 1.33702 1.3362 1.3361 1.3361 1.3361 1.3368 40.0 1.34017 1.34008 1.33998 1.33998 1.33998 1.33997 1.33998	1.33840 1.33833 1.33822 1.33788 1.33737 1.33757 1.33757 1.33757 1.33757 1.33720 1.33679 1.33679 1.33686 41.0 1.34028 1.34017 1.34028 1.34017 1.33991 1.33991 1.33991 1.33991 1.33991 1.33991 1.33991 1.33839 1.33839 1.33839	32.0 1.33860 1.33851 1.33851 1.33811 1.33877 1.33778 1.33778 1.33778 1.33778 1.33757 1.33758 1.3367 1.3367 1.3367 1.3367 1.3367 1.3367 1.3367 1.3367 1.3367 1.3367 1.3370 1.3370 1.3370 1.3370 1.3370 1.3370 1.3370 1.3370 1.3370 1.33870 1.33877 1.33851	33.0  1.33879 1.33872 1.33863 1.33852 1.33840 1.33810 1.33775 1.33775 1.33775 1.33775 1.33775 1.33775 1.33790 1.34076 1.34076 1.34076 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34066 1.34076 1.34066 1.34076 1.34086 1.34099 1.33978 1.33978 1.33978 1.33978 1.33998 1.339978 1.339978 1.339978 1.33879 1.338849
0-0 2-0 4-0 8-0 1C-0 1C-0 14-0 16-0 20-0 22-0 24-0 26-0 28-0 30-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 10-0 20-0	1.33273 1.332231 1.332231 1.33225 1.33215 1.33206 1.33194 1.33170 1.33154 1.33100 1.33077 1.33033 34.0 1.33092 1.33821 1.33821 1.33821 1.33821 1.33775	1.33321 1.33329 1.33328 1.33310 1.33328 1.33276 1.33289 1.33286 1.33246 1.33246 1.3328 1.33246 1.33146 1.33146 1.33146 1.33146 1.33146 1.33146 1.33391 1.33901	1.33-29 1.33-20 1.33-20 1.33-13 1.33-04 1.33-39 1.33-37 1.33-37-1 1.33-29 1.33	15.0  1.33527 1.33529 1.33549 1.33549 1.33545 1.33545 1.33545 1.33569 1.33369 1.33369 1.33389 1.33381 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33950 1.33760 1.33761 1.33761	LIMITY (0 20.0 1.33625 1.33620 1.33613 1.33503 1.33543 1.33543 1.33554 1.335515 1.335515 1.335515 1.335459 1.33459 1.33459 1.33459 1.33471 1.3390 1.33978 1.33991 1.33991 1.33991 1.33991 1.33991 1.33987 1.33867 1.33867 1.33867 1.33867 1.33867 1.33752 1.33752	25.0  1.33723 1.33771 1.33700 1.33841 1.33676 1.33641 1.33673 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33570 1.33987 1.33987 1.33988 1.33998 1.33998 1.33998 1.33988 1.33988 1.33865 1.33865 1.33865 1.33865 1.33865	1.33821 1.33814 1.33795 1.33779 1.33779 1.33776 1.337702 1.33702 1.3361 1.3361 1.3361 1.3361 1.3361 1.3368 40.0 1.34008 1.33978 1.33978 1.33978 1.33978 1.33978 1.33984 1.33984 1.33843 1.33864 1.33861 1.33861 1.33861 1.33861 1.33861 1.33861	1.33840 1.33833 1.33822 1.33814 1.33802 1.33781 1.33781 1.33773 1.33770 1.33770 1.33677 1.3367 1.3361 1.33586 41.0 1.34036 1.34017 1.34017 1.34017 1.34017 1.34017 1.33922 1.34017 1.33921 1.33921 1.33921 1.33921 1.33921 1.33921 1.33859 1.33851 1.33859 1.33859 1.33851	32.0 1.33860 1.33853 1.33844 1.33837 1.33827 1.33775 1.33775 1.33775 1.33776 1.33718 1.33672 1.33672 1.33672 1.33672 1.33672 1.33672 1.33672 1.33672 1.33672 1.33672 1.33874 1.33960 1.34978 1.33960 1.33990 1.338997 1.33874	33.0 1.33879 1.33872 1.33852 1.33852 1.33840 1.33810 1.33775 1.33775 1.33776 1.33776 1.33776 1.33776 1.33670 1.33670 1.33670 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.340776 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34077 1.33977 1.33977 1.33977 1.33977 1.33977 1.33977

Table A-3. INDEX OF REFRACTION OF SEAWATER
Wevelengths used by Mehu and Johannin-Gilles — Asmospheric Pressure

					<b>(a)</b>				[He]	λ = <b>404.7 nm</b>
TROOP					LIMITY (e	-				
<b>℃</b>	. 0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0 2.0	1.34375	1.34478	1.34581	1.34485	1.34788	1.34891	1.34994	1.35015	1.35035	1.35056 1.35047
4.0	1.34370	1.34471	1.34573	1.34473	1.34774	1.34875	1.34976	1.34997	1.35017	1.35037
4.0	1.34345	1.34465	1.34545	1.34465	1.34765	1.34866	1.34944	1.34986	1.35004	1.35026
	1.34357	1.34457	1.34556	1.34656	1.34755	1.34854	1.34954	1.34974	1.34994	1.35014 1.35000
10.0 12.0	1.34345	1.34447	1.34545	1.34644	1.34730	1.34828	1.34926	1.34946	1.34966	1.34985
14.0	1.34323	1.34421	1.34519	1.34617	1.34714	1.34812	1.34910	1.34930	1.34949	1.34969
16.0	1.34306	1.34405	1.34503	1.34600	1.34697	1.34795	1.34892	1.34912	1.34931	1.34951
18.0	1.34292	1.34308	1.34486	1.34502	1.34479	1.34776	1.34873	1.34893	1.34912	1.34932 1.34911
20.0 22.0	1.34274	1.34370	1.34467	1.34543	1.34660	1.34757	1.34832	1.34851	1.34871	1.34890
24.0	1.34234	1.34330	1.34424	1.34522	1.34610	1.34714	1.34310	1.34829	1.34848	1.34867
24.0	1.34213	1.34308	1.34404	1.34500	1.34595	1.34691	1.34786	1.34805	1.34825	1.34844
28.0	1.34190	1.34285	1.34380	1.34476	1.34571	1.34666	1.34762	1.34781	1.34800	1.34019 1.34793
30.0	1.34166	1.34261	1.34354	1.34471	143737	1454641	1.54130	1434133	1034114	1034773
	34.0	35.0	36.0	37.0	. 38.0	39.0	40.0	41.0	42.0	43.0
0.0	1.35077	1.35097		1.35138	1.35159	1.35180	1.35200	1.35221	1.35242	1.35243 1.35251
2.0 4.0	1.35067	1.350##	1.35108	1.35129	1.35149	1.35150	1.3517#	1.35199	1.35231	1.35231
6.0	1.35044	1.35066	1.35086	1.35106	1.35126	1.35146	1.35166	1.35106	1.35204	1.35226
8.0	1.35034	1.35054	1.35073	1.35093	1.35113	1.35133	1.35153	1.35173	1.35193	1.35213
1C.0	1.35020	1.35040	1.35060	1.35080	1.35099	1.35119	1.35139	1.35158	1.35178	1.35196
12.0	1.35005	1.35025	1.35044	1.35064	1.35083	1.35103	1.35123	1.35143	1.35162	1.35102
14.0	1.34988	1.35008	1.35027	1.35047	1.35044	1.35086	1.35106	1.35106	1.35126	1.35164 1.35143
18.0	1.34951	1.34970	1.34990	1.35009	1.35029	1.35048	1.35067	1.35067	1.35106	1.35125
20-0	1.34930	1-34950	1.34969	1.34489	1.35008	1.35027	1.35047	1.35046	1.35085	1.35104
27.0	1.34909	1.34928	1.34947	1.34967	1.34986	1.35005	1.35025	1.35044	1.35063	1.35082
24.0 26.0	1.34896	1.34906	1.34925	1.34944	1.34963	1.34982 1.3495#	1.35001	1.34996	1.35040	1.35059
28.0	1.34638	1.34857	1.34876	1.34495	1.34914	1.34933	1.34952	1,34971	1.34990	1.35009
10.0	1.34617	1.34831	1.3485C	1.34869	1.34888	1.34907	1.34926	1.34945	1.34964	1.34983
TEMP				SA	( <b>b)</b> Limity (•	<b>/10)</b>			[Hg]	λ = <b>436.8</b> nm
TEMP °C	0.0	5.0	10.0			/ <b>10)</b>	30.0	31.0	[ <b>Hg</b> ]	λ = <b>436.8</b> nm
°C				15+0	20.0	25.0		31.0 1.34753		
	0.0 1.34121 1.34120	5.0 1.34223 1.34221	10.0 1.34325 1.34322		LIMITY (0 20.0 1.34529 1.34523	25.0 1.34631 1.34625	1.34733	1.34753	32.0 1.34774 1.34766	33.0 1.34794 1.34786
0.0 2.0 4.0	1.34121 1.34120 1.34116	1.34223 1.34221 1.34216	1.34325 1.34322 1.34316	15.0 1.24427 1.34423 1.34416	20.0 20.0 1.34529 1.34523 1.34516	25.0 1.34631 1.34625 1.34616	1.34733 1.34726 1.34716	1.34753 1.34746 1.34737	32.0 1.34774 1.34766 1.34756	33.0 1.34794 1.34786 1.34776
0.0 2.0 4.0 6.0	1.34121 1.34120 1.34116 1.34111	1.34223 1.34221 1.34216 1.34210	1.34325 1.34322 1.34316 1.34309	15.0 1.24427 1.34423 1.34416 1.34408	20.0 1.34529 1.34523 1.34516 1.34507	25.0 1.34631 1.34625 1.34616 1.34607	1.34733 1.34726 1.34716 1.34706	1.34753 1.34746 1.34737 1.34726	32.0 1.34774 1.34766 1.34756 1.34745	33.0 1.34794 1.34786 1.34786 1.34785
0.0 2.0 4.0 6.0	1.34121 1.34120 1.34116 1.34111 1.34103	1.34223 1.34221 1.34216 1.34210 1.34202	1.34325 1.34322 1.34316 1.34309 1.34300	15.0 1.24427 1.34423 1.34416	20.0 20.0 1.34529 1.34523 1.34516	25.0 1.34631 1.34625 1.34616	1.34733 1.34726 1.34716	1.34753 1.34746 1.34737	32.0 1.34774 1.34766 1.34756	33.0 1.34794 1.34786 1.34776 i.34765 1.34753
0.0 2.0 4.0 6.0	1.34121 1.34120 1.34116 1.34111	1.34223 1.34221 1.34216 1.34210	1.34325 1.34322 1.34316 1.34309 1.34300 1.34289 1.34277	15.0 1.24427 1.34423 1.34416 1.34408 1.34398 1.34387 1.34373	20.0 1.34529 1.34523 1.34516 1.34507 1.34485 1.34485	25.0 1.34631 1.34625 1.34616 1.34607 1.34595 1.34582	1.34733 1.34726 1.34716 1.34706 1.34694 1.34665	1.34753 1.34746 1.34737 1.34726 1.34713 1.34700	32.0 1.34774 1.34766 1.34756 1.34745 1.34743 1.34719	33.0 1.34794 1.34766 1.34776 1.34775 1.34753 1.34739 1.34739
0.0 2.0 4.0 6.0 8.0 10.0 12.0	1.34121 1.34120 1.34116 1.34111 1.34103 1.34094 1.34082 1.34069	1.34223 1.34221 1.34216 1.34210 1.34202 1.34191 1.34179 1.34165	1.34325 1.34322 1.34316 1.34300 1.34289 1.34277 1.34262	15.0 1.24427 1.34423 1.34414 1.34408 1.34387 1.34373 1.34359	20.0 1.34529 1.34523 1.34516 1.34507 1.34497 1.34485 1.34471 1.34455	25.0 1.34631 1.34625 1.34616 1.34607 1.34595 1.34582 1.34568 1.34552	1.34733 1.34726 1.34716 1.34706 1.34694 1.34665 1.34648	1.34753 1.34746 1.34737 1.34726 1.34713 1.34700 1.34684 1.34667	32.0 1.34774 1.34766 1.34756 1.34745 1.34743 1.34704 1.34087	33.0 1.34794 1.34786 1.34776 1.34775 1.34753 1.34739 1.34739 1.34739
0.0 2.0 4.0 6.0 9.0 10.0 12.0 14.0	1.34121 1.34120 1.34116 1.34111 1.34103 1.34094 1.34082 1.34069	1.34223 1.34221 1.34216 1.34210 1.34202 1.34191 1.34179 1.34165	1.34325 1.34322 1.34316 1.34309 1.34209 1.34277 1.34262 1.34262	15.0 1.24427 1.34423 1.34416 1.34408 1.34398 1.34373 1.34359 1.34359	1.34529 1.34529 1.34523 1.34516 1.34507 1.34497 1.34495 1.34471 1.34475	25.0 1.34631 1.34625 1.34616 1.34607 1.34595 1.34582 1.34552 1.34552	1.34733 1.34726 1.34716 1.34706 1.34690 1.34665 1.34648 1.34648	1.34753 1.34746 1.34737 1.34726 1.34713 1.34700 1.34684 1.34667	32.0 1.34774 1.34766 1.34756 1.34755 1.34719 1.34719 1.34607 1.34667	33.0 1.34794 1.34766 1.34776 1.34775 1.34753 1.34739 1.34739
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0	1.34121 1.34120 1.34116 1.34111 1.34103 1.34094 1.34082 1.34069	1.34223 1.34221 1.34216 1.34210 1.34202 1.34191 1.34179 1.34165	1.34325 1.34322 1.34316 1.34300 1.34289 1.34277 1.34262	15.0 1.24427 1.34423 1.34414 1.34408 1.34387 1.34373 1.34359	20.0 1.34529 1.34523 1.34516 1.34507 1.34497 1.34485 1.34471 1.34455	25.0 1.34631 1.34625 1.34616 1.34607 1.34595 1.34582 1.34568 1.34552	1.34733 1.34726 1.34716 1.34706 1.34694 1.34665 1.34648	1.34753 1.34746 1.34737 1.34726 1.34713 1.34700 1.34684 1.34667	32.0 1.34774 1.34766 1.34756 1.34753 1.34719 1.34607 1.34667 1.34651 1.34631	33.0 1.34794 1.34786 1.34776 1.34775 1.34739 1.34739 1.34723 1.34706 1.34688 1.34669 1.34650
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0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 18.0 20.0 22.0 24.0 28.0 30.0	1.34121 1.34120 1.34116 1.34111 1.34031 1.34082 1.34069 1.34051 1.34051 1.33980 1.33981 1.33981 34.0 1.33981 34.0 1.34814 1.34816 1.34776 1.34776 1.34776 1.34776 1.34776 1.34776 1.34786 1.34742 1.34768 1.34689 1.34689	1.34223 1.34221 1.34210 1.34202 1.34191 1.34197 1.34195 1.34150 1.34134 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.34076 1.348105 1.348105 1.348105 1.348105 1.348105 1.34762 1.34762 1.34762 1.34762 1.34764 1.346464 1.346464 1.34654	1.34325 1.34326 1.34300 1.34289 1.34262 1.34262 1.34264 1.34211 1.34171 1.34171 1.34171 1.34171 1.34181 1.34171 1.34181 1.34171 1.34836 1.34836 1.34836 1.34764 1.34764 1.34764 1.34764 1.34765 1.34766 1.34766 1.34766 1.34685 1.34662 1.34638	15.0 1.24427 1.34423 1.34408 1.34373 1.34373 1.34373 1.34325 1.34327 1.34287 1.34287 1.34287 1.34283 1.34283 1.34283 1.34283 1.34283 1.34831 1.34831 1.34831 1.34831 1.34870 1.34704 1.34704 1.34704 1.34632 1.34632	20.0 1.34529 1.34523 1.34516 1.34597 1.34497 1.34495 1.34455 1.34455 1.34455 1.34451 1.34451 1.34402 1.34382 1.34383 1.3428 38.0 1.34867 1.34867 1.34867 1.34867 1.34867 1.34867 1.34867 1.34867 1.34867 1.34876 1.34765 1.34765 1.34765	25.0 1.34631 1.34625 1.34616 1.34595 1.34595 1.34596 1.34596 1.34597 1.34597 1.34497 1.34497 1.34497 1.34907 1.34907 1.3486 1.34907 1.34884 1.34870 1.34870 1.34870 1.34870 1.34870 1.34870 1.34870 1.34870 1.34870	1.34733 1.34726 1.34706 1.34694 1.34648 1.34648 1.34648 1.34593 1.34573 1.34571 1.34579 1.34571 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34971 1.34738 1.34738 1.34738 1.34738	1.34753 1.34746 1.34737 1.34726 1.34713 1.34667 1.34651 1.34651 1.34531 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34546 1.34571 1.34842 1.34862 1.34862 1.34737 1.34737	32.0 1.34774 1.34765 1.34756 1.34756 1.34767 1.34704 1.34669 1.34651 1.34651 1.34587 1.34583 1.34513 42.0 1.34958 1.34956 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34856 1.34756	33.0  1.34794 1.34766 1.34776 1.34776 1.34765 1.34753 1.34739 1.34723 1.34706 1.34669 1.34669 1.34650 1.34650 1.34651 1.34988 1.34989 1.34881 1.34881 1.34881 1.34881 1.34840 1.34818 1.34795 1.34771

Table A-3. (cont)

					(e)				(-4)	\ 400 A
THE					LIMITY (C	<b>4-3</b>				λ = <b>467.8</b> mm
· <del>~</del>	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33913	1.34014	1.34115	1.34215	1.34314	1.34417	1.34517	1.34530	1.34550	1.34578
2.0	1.33912	1.34012	1.34111	1.34211	1.34311	1.34411	1.34511	1.34531	1.34551	1.34571
4.0	1.33900	1.34007	1.34104	1.34205	1.34304	1.34403	1.34502	1.34522	1.34542	1.34562
4.0	1.33903	1.34001	1.34099	1.34197	1.34299	1.34394	1.3449?	1.34512	1.34531	1.34551
8.0 19.0	1.33095	1.33993	1.34079	1.34188	1.34205	1.34363	1.34460	1.34499	1.34519	1.34539 1.34524
12.0	1.33074	1.33570	1.34066	1.34162	1.34258	1.34354	1.34451	1.34470	1.34409	1.34500
14.0	1.33041	1.33957	1.34052	1.34147	1.34243	1.34338	1.04434	1.34453	1.34472	1.34491
14.0	1.33044	1.33941	1.34036	1.34131	1.34226	1.34321	1.34416	1.34435	1.34453	1-34472
10.0	1.33430	1.33424	1.34019	1.34113	1.34200	1.34302	1.34397	1.34416	1.34434	1.34453
20.0 22.0	1.33013	1.33907	1.34001	1.34095	1.34169	1.34263	1.34377	1.34376	1.34414	1.34433
24.0	1.33774	1.33046	1.33961	1.34054	1.34147	1.34241	1.34334	1.34353	1.34371	1.34390
26.0	1.33753	1.33644	1.23739	1.34632	1.34125	1.34218	1,34311	1.34330	1.34348	1.34367
26.0	1.33730	1.33623	1.33914	1.34009	1-34102	1.34194	1.34207	1.34306	1.34324	1.36343
30.0	1.33704	1.33799	1.33091	1.33984	1.34077	1.34169	1.34262	1.34281	1.34299	1.34316
	34.0	35.0	36.0	37.0	36.0	39.0	40.0	41.0	42.0	43.0
•.0	1.34598	1.34618	1.34639	1.34659	1.34679	1.34499	1.34719	1.34739	1.34759	1.34780
2.0	1.34591	1.34611	1.34431	1.34651	1.34671	1.34691	1.34711	1.34731	1.34750	1.34770
4.0	1.34561	1.34401	1.34621	1.34641	1.34661	1.34680	1.34700	1.34720	1.34740	1.34740
6.0	1.34570	1.34590	1.34610	1.34629	1.34649	1.34668	1.34688	1.34700	1.34728	1.34747
8.0 10.0	1.34558	1.34577	1.34597	1.34616	1.34636	1.34655	1,34640	1.34674	1.34714	1.34733 1.34718
12.0	1.34527	1.34547	1.34566	1.34505	1.34604	1.34623	1.34643	1.34662	1.34481	1.34700
14.0	1.34510	1.34529	1.34548	1.34547	1.34586	1.34405	1.34624	1.34643	1.34443	1.34682
16.0	1.34492	1.34510	1.34529		1.34567	1.34586	1.34605	1.34624	1.34443	1.34662
18.0	1.34472	1.34491		1.34529	1.34548	1.34547	1.34585	1.34604	1.34623	1.34642 1.34621
2 <b>0.</b> 0 22.0	1.34431	1.34449	1.34468	1.34487	1.34506	1.34524	1.34543	1.34562	1.34581	1.34599
24.0	1.34409	1.34427	1.34446	1.34464	1.34483	1.34502	1.34521	1.34539	1.34558	1.34577
26.0	1.34385	1.34404	1.34423	1.34441	1.34460	1.34479	1.34497	1.34516	1.34534	1.34553
28.0	1.34341	1.34380		1.34417	1.34436	1.34454	1.34473	1.34491	1.34510	1.34529 1.34503
30.0	1.54334	*******	******	1.54372	1034411	1034727	103444	1.34400	1.34485	1.34303
200					(d)				[C4]	λ = <b>508.6</b> nm
TEMP °C	9.6	<b></b>	10-0		LDRTY (		30.0	31.0		<del></del>
°C	0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0
0.0	1.33701	1.33801	1.33901	15.0 1.34001	20.0 1.34100	25.0 1.34201	1.34301	1.34320	32.0 1.34340	33.0
0.0 2.0	1.33701 1.33700	1.33801	1.33901	15.0 1.34001 1.33997	20.0 1.34100 1.34096	25.0 1.34201 1.34195	1.34301	1.34320 1.34314	32.0 1.34340 1.3433	33.0 1.34361 1.34353
0.0 2.0 4.0 6.0	1.33701 1.33700 1.33497 1.33491	1.33801 1.33799 1.33794 1.33788	1.33901 1.33698 1.33893 1.33885	15.0 1.34001 1.33997 1.33991 1.33982	20.0 1.34100 1.34096 1.34089	25.0 1.34201 1.34195 1.34187 1.34177	1.34301 1.34294 1.34285 1.34274	1.34320 1.34314 1.34305 1.34294	32.0 1.34340 1.34333 1.34324 1.34313	33.0 1.34361 1.34353 1.34344 1.34333
0.0 2.0 4.0 4.0	1.33701 1.33700 1.33697 1.33691 1.33683	1.33801 1.33799 1.33794 1.33788 1.33779	1.33901 1.33098 1.33093 1.33085 1.33876	15.0 1.34001 1.33997 1.33991 1.33982 1.33972	20.0 1.34100 1.34096 1.34089 1.34080	25.0 1.34201 1.34195 1.34187 1.34177	1.34301 1.34294 1.34285 1.34274 1.34262	1.34320 1.34314 1.34305 1.34294 1.34281	32.0 1.34340 1.34333 1.34324 1.34313 1.34301	33.0 1.34361 1.34353 1.34344 1.34333 1.34320
0.0 2.0 4.0 6.0 8.0	1.33701 1.33700 1.33697 1.33691 1.33683 1.33674	1.33801 1.33799 1.33794 1.33788 1.33779 1.33769	1.33901 1.33698 1.33693 1.33665 1.33676	15.0 1.34001 1.33997 1.33991 1.33982 1.33972	20.0 1.34100 1.34096 1.34089 1.34089 1.34089	25.0 1.34201 1.34195 1.34187 1.34165 1.34152	1.34301 1.34294 1.34285 1.34274 1.34262 1.34248	1.34320 1.34314 1.34305 1.34294 1.34281 1.34267	32.0 1.34340 1.34333 1.34324 1.34313 1.34301 1.34284	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34306
0.0 2.0 4.0 4.0	1.33701 1.33700 1.33697 1.33691 1.33683	1.33801 1.33799 1.33794 1.33788 1.33779	1.33901 1.33098 1.33093 1.33085 1.33876	15.0 1.34001 1.33997 1.33991 1.33982 1.33972	20.0 1.34100 1.34096 1.34089 1.34080	25.0 1.34201 1.34195 1.34187 1.34177	1.34301 1.34294 1.34285 1.34274 1.34262	1.34320 1.34314 1.34305 1.34294 1.34281	32.0 1.34340 1.34333 1.34324 1.34313 1.34301	33.0 1.34361 1.34353 1.34344 1.34333 1.34320
0.0 2.0 4.0 6.0 10.0 12.0 14.0	1.33701 1.33700 1.33697 1.33691 1.33683 1.33674 1.33663 1.33651	1.33801 1.33799 1.33794 1.33789 1.33769 1.33769 1.33758 1.33745	1.33901 1.33698 1.33693 1.33665 1.33665 1.33653 1.33639	15.0 1.34001 1.33997 1.33991 1.33982 1.33940 1.33948 1.33934	1.34100 1.34100 1.34096 1.34080 1.34080 1.34087 1.34043 1.34043 1.34028 1.34011	25.0 1.34201 1.34195 1.34187 1.34165 1.34152 1.34138 1.34122 1.34105	1.34301 1.34294 1.34285 1.34274 1.34262 1.34248 1.34233 1.34214	1.34320 1.34314 1.34305 1.34294 1.34267 1.34267 1.34252 1.34235	32.0 1.34340 1.3433 1.34313 1.34301 1.34284 1.34271 1.34274 1.34274	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34320 1.34290 1.34273 1.34273
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0	1.33701 1.33700 1.33697 1.33691 1.33683 1.33674 1.33633 1.33651 1.33636	1.33801 1.33794 1.33788 1.33779 1.33769 1.33769 1.33745 1.33730 1.33714	1.33901 1.33698 1.33895 1.33865 1.33865 1.33853 1.33839 1.33824 1.33807	15.0 1.34001 1.33997 1.33991 1.33982 1.33961 1.3398 1.33934 1.33917 1.33900	20.0 1.34100 1.34096 1.34089 1.34089 1.34089 1.34087 1.34093 1.34028 1.34021 1.34028	25.0 1.34201 1.34195 1.34187 1.34187 1.34165 1.34132 1.34138 1.34132 1.34087	1.34301 1.34294 1.34285 1.342862 1.34262 1.34248 1.34214 1.34216 1.34199	1.34320 1.34314 1.34305 1.34294 1.34281 1.34267 1.34252 1.34735 1.34217 1.34198	32.0 1.34340 1.34333 1.34324 1.34313 1.34301 1.34264 1.34271 1.34254 1.34236 1.34231	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34306 1.34290 1.34273 1.34275
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0	1.33701 1.33700 1.33697 1.33691 1.33683 1.33674 1.33663 1.33636 1.33630	1.33801 1.33799 1.33788 1.33779 1.33769 1.33758 1.33745 1.33740 1.33714	1.33901 1.33978 1.33983 1.33885 1.33876 1.33853 1.33839 1.33824 1.33807 1.33789	15.0 1.34001 1.33997 1.33991 1.33982 1.33991 1.33948 1.33934 1.33917 1.33900 1.33881	20.0 1.34100 1.34094 1.34099 1.34080 1.34080 1.34057 1.34053 1.34011 1.33993 1.33993	25.0 1.34201 1.34195 1.34187 1.34167 1.34152 1.34138 1.34122 1.34087	1.34301 1.34294 1.34285 1.34274 1.34262 1.34248 1.34233 1.34199 1.34180	1.34320 1.34314 1.34305 1.34294 1.34281 1.34267 1.34252 1.34273 1.34217 1.34178	32.0 1.34340 1.34333 1.34324 1.34301 1.34201 1.34271 1.34254 1.34231 1.34231 1.34231	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34306 1.34290 1.34273 1.34275 1.34275 1.34274
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 14.0 20.0 22.6 24.0	1.33701 1.33700 1.33497 1.33491 1.33493 1.33474 1.33463 1.33453 1.33453 1.33453 1.33534	1.33#01 1.33799 1.33794 1.33788 1.33779 1.33749 1.33749 1.33749 1.33740 1.33714 1.33694 1.33677 1.33656	1.33401 1.33498 1.33493 1.33485 1.33876 1.33845 1.33839 1.33824 1.33749 1.33749	15.0 1.34001 1.33997 1.33991 1.33992 1.33948 1.33917 1.33917 1.33917 1.3361 1.3361 1.3361	20.0 1.34100 1.34090 1.34080 1.34080 1.34087 1.34077 1.34043 1.34028 1.34021 1.33973 1.33973 1.33973 1.33973	25.0 1.34201 1.34195 1.34187 1.34185 1.34352 1.34138 1.34122 1.34087 1.34087 1.34087 1.34087	1.34301 1.34294 1.34285 1.34274 1.34248 1.3423 1.3423 1.3429 1.34199 1.34180 1.34140 1.34131	1.34320 1.34314 1.34305 1.34294 1.34281 1.34267 1.34252 1.34735 1.34217 1.34198	32.0 1.34340 1.34333 1.34324 1.34313 1.34301 1.34264 1.34271 1.34254 1.34236 1.34231	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34306 1.34290 1.34273 1.34275 1.34274 1.34216 1.34173
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 22.6 24.0	1.33701 1.33700 1.33697 1.33693 1.33693 1.33693 1.33693 1.33693 1.33694 1.33594	1.33e01 1.33799 1.33794 1.33788 1.33769 1.33765 1.33745 1.33730 1.33714 1.33696 1.33676 1.33676	1.33401 1.33498 1.33493 1.33465 1.33876 1.33853 1.33839 1.33839 1.33839 1.33749 1.33749 1.33749 1.33749	15.0 1-34001 1.33997 1.33992 1.33992 1.33948 1.33917 1.33910 1.3381 1.3362 1.33819	20.0 1.34100 1.34046 1.34089 1.34089 1.34089 1.34057 1.34049 1.34057 1.34043 1.34011 1.33993 1.33974 1.33953 1.33931	25.0 1.34201 1.34195 1.34187 1.34187 1.34185 1.34138 1.34122 1.34087 1.34087 1.34047 1.34047 1.34063	1.34301 1.34294 1.34285 1.34274 1.34248 1.34283 1.34214 1.34199 1.34190 1.34190 1.34180 1.34180 1.34180 1.34181	1.34320 1.34314 1.34305 1.34294 1.34287 1.34252 1.34252 1.34217 1.34198 1.34178 1.3418 1.34130 1.34114	32.0 1.34340 1.34333 1.34324 1.34301 1.34284 1.34271 1.34254 1.34234 1.34217 1.34177 1.34175 1.34155 1.34132	33.0  1.34361 1.34353 1.34344 1.34333 1.34320 1.34290 1.34273 1.34275 1.34275 1.34275 1.34275 1.34276 1.34173 1.34173
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 14.0 20.0 20.0 24.0 24.0 24.0 28.0	1.33701 1.33700 1.33697 1.33693 1.33693 1.33693 1.33651 1.33636 1.33603 1.33584 1.33543 1.33543	1.33#01 1.33799 1.33784 1.33789 1.33789 1.33769 1.33745 1.33745 1.33745 1.33745 1.3365 1.3365 1.3365 1.33635	1.33901 1.33892 1.33893 1.33865 1.33874 1.33853 1.33839 1.33824 1.33807 1.33769 1.33769 1.33779	15.0 1.34001 1.33997 1.33992 1.33972 1.33972 1.33917 1.33917 1.33917 1.33917 1.33612 1.33612 1.33612 1.33612 1.33612	20.0 1.34100 1.34049 1.34049 1.34049 1.34049 1.34043 1.34043 1.34024 1.34024 1.34021 1.33993 1.33974 1.33954 1.33954 1.33953 1.33951	25.0 1.34201 1.34195 1.34187 1.3417 1.34152 1.34152 1.34105 1.34087 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067	1.34301 1.34284 1.34285 1.34274 1.34284 1.34233 1.34214 1.34189 1.34180 1.34139 1.34181 1.34095 1.34071	1.34320 1.34314 1.34305 1.34294 1.34267 1.34252 1.34235 1.34136 1.34178 1.34158 1.34136 1.34136 1.34136	32.0 1.34340 1.3433 1.34323 1.34301 1.34201 1.34271 1.34234 1.34217 1.34174 1.34175 1.34176 1.34176 1.34176	33.0 1.34361 1.34353 1.34344 1.34333 1.34320 1.34290 1.34273 1.34275 1.34275 1.34216 1.34216 1.34173 1.34173 1.34170
0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 22.6 24.0	1.33701 1.33700 1.33697 1.33693 1.33693 1.33693 1.33693 1.33693 1.33694 1.33594	1.33e01 1.33799 1.33794 1.33788 1.33769 1.33765 1.33745 1.33730 1.33714 1.33696 1.33676 1.33676	1.33401 1.33498 1.33493 1.33465 1.33876 1.33853 1.33839 1.33839 1.33839 1.33749 1.33749 1.33749 1.33749	15.0 1-34001 1.33997 1.33992 1.33992 1.33948 1.33917 1.33910 1.3381 1.3362 1.33819	20.0 1.34100 1.34046 1.34089 1.34089 1.34089 1.34057 1.34049 1.34057 1.34043 1.34011 1.33993 1.33974 1.33953 1.33931	25.0 1.34201 1.34195 1.34187 1.34187 1.34185 1.34138 1.34122 1.34087 1.34087 1.34047 1.34047 1.34063	1.34301 1.34294 1.34285 1.34274 1.34248 1.34283 1.34214 1.34199 1.34190 1.34190 1.34180 1.34180 1.34180 1.34181	1.34320 1.34314 1.34305 1.34294 1.34287 1.34252 1.34252 1.34217 1.34198 1.34178 1.3418 1.34130 1.34114	32.0 1.34340 1.34333 1.34324 1.34301 1.34284 1.34271 1.34254 1.34234 1.34217 1.34177 1.34175 1.34155 1.34132	33.0  1.34361 1.34353 1.34344 1.34333 1.34320 1.34290 1.34273 1.34275 1.34275 1.34275 1.34275 1.34276 1.34173 1.34173
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0.0 2.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 22.6 24.0 28.0 30.0	1.33701 1.33700 1.33697 1.33693 1.33693 1.33693 1.33693 1.33693 1.33594 1.33594 1.33593 1.33597 34.0	1.33m01 1.33799 1.33794 1.33788 1.33779 1.33769 1.33765 1.33770 1.33676 1.33677 1.33656 1.33678 1.33658 35.0 1.34400 1.34400 1.34400 1.34493 1.34383	1.33901 1.33498 1.33493 1.33485 1.33874 1.33853 1.33839 1.33824 1.33807 1.33749 1.33749 1.33749 1.33749 1.33749 1.33740 1.3440	15.0 1.34001 1.3397 1.33991 1.33992 1.33948 1.33917 1.33900 1.33882 1.33862 1.33819 1.33819 1.33771 37.0 1.34440 1.34440 1.34442 1.34442	20.0 1.34100 1.34096 1.34089 1.34080 1.34080 1.34080 1.34081 1.34081 1.34081 1.33993 1.339974 1.33993 1.339911 1.33988 1.33883	25.0 1.34201 1.34195 1.34177 1.34177 1.34152 1.34125 1.34087 1.34087 1.34087 1.34087 1.34087 1.34087 1.34083 1.34979 1.34480 1.34480 1.34480 1.34480 1.34480 1.34480 1.34480 1.34480 1.34480 1.34480	1.34301 1.34294 1.34285 1.34286 1.34248 1.34233 1.34214 1.34199 1.34180 1.34139 1.34181 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095 1.34095	1.34320 1.34314 1.34305 1.34281 1.34287 1.34287 1.34287 1.34138 1.34198 1.34198 1.34138 1.34134 1.34090 1.34065	32.0 1.34340 1.34331 1.34301 1.34301 1.34284 1.34271 1.34296 1.34296 1.34296 1.34197 1.34197 1.34198 1.34083 42.0 1.34540 1.34540 1.34540 1.34531 1.34540	33.0  1.34361 1.34353 1.34344 1.34333 1.34320 1.34320 1.34273 1.34275 1.34275 1.34276 1.34216 1.34175 1.34170 1.34170 1.34170 1.34170 1.34170 1.34540 1.34540
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0.0 2.0 4.0 4.0 8.0 10.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 24.0 24	1.33701 1.33670 1.33691 1.33683 1.33674 1.33663 1.33620 1.33636 1.33584 1.33594 1.33594 1.33594 1.33591 1.34397 34.0 1.34380 1.34373 1.34397 1.34391	1.33m01 1.33799 1.33798 1.33779 1.33758 1.33755 1.33756 1.33736 1.33677 1.33656 1.33656 1.33656 1.33656 1.34650 1.34573 1.34573 1.3458 1.34573 1.3458 1.34573 1.3458 1.34573 1.3458 1.34573 1.3458 1.34573 1.3458 1.	1.33901 1.33808 1.33808 1.33865 1.33865 1.33863 1.33807 1.33709 1.33769 1.33779 1.33770 1.33704 1.34413 1.34403 1.34413 1.34403 1.34413 1.34304 1.3430	15.0  1.34001 1.33997 1.33992 1.33992 1.33992 1.33994 1.33991 1.33802 1.33801 1.33802 1.33870 1.33870 1.3440 1.3432 1.3441 1.3437 1.34382 1.3441 1.34382 1.34382 1.34382 1.34382 1.34382 1.34382 1.34382 1.34382 1.34382 1.34382	20.0 1.34100 1.34094 1.34089 1.34089 1.34089 1.34089 1.34089 1.34081 1.33993 1.33993 1.33993 1.33993 1.33983 38.0 1.34410 1.34452 1.34430 1.34410 1.34385 1.34385 1.34385 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386 1.34386	25.0  1.34201 1.34187 1.34187 1.34181 1.34182 1.34105 1.34087 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34067 1.34061 1.34420 1.34436 1.34436 1.34436 1.34436 1.34436 1.34368 1.34368 1.34368 1.34368 1.34368 1.34368 1.34368 1.34368 1.34368 1.34368	1.34301 1.34294 1.34285 1.34274 1.34242 1.34243 1.34214 1.34190 1.34180 1.34181 1.34090 1.34492 1.34450 1.34492 1.34450 1.34450 1.34492 1.34450 1.34492 1.34450 1.34492 1.34450 1.34492 1.34450 1.34492 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450 1.34450	1.34320 1.34314 1.34305 1.34294 1.34281 1.34282 1.34282 1.34282 1.34198 1.34118 1.34136 1.34136 1.34136 1.34500 1.3450	32.0 1.34340 1.3433 1.34301 1.34301 1.34284 1.34271 1.34296 1.34271 1.34176 1.34176 1.34176 1.34176 1.34176 1.34176 1.34521 1.34508	33.0  1.34361 1.34353 1.34354 1.34353 1.34320 1.34290 1.34273 1.34255 1.34276 1.34195 1.34173 1.34150 1.34150 1.34150 1.34501 43.0  1.34560 1.34551 1.34577 1.34513 1.34540
0.0 2.0 4.0 4.0 10.0 12.0 14.0 14.0 22.5 24.0 22.5 24.0 28.0 30.0	1.33701 1.33701 1.33691 1.33693 1.33674 1.33693 1.33636 1.33630 1.33564 1.33543 1.33544 1.33543 1.33541 1.33543 1.33521 1.33497	1.33m01 1.33799 1.33798 1.33779 1.33758 1.33755 1.33756 1.33714 1.33656 1.33656 1.33656 1.33656 1.33656 1.34670 1.34593 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.3439 1.34	1.33901 1.33898 1.33895 1.33865 1.33865 1.33865 1.33867 1.33769 1.33769 1.33779 1.33769 1.33769 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34403 1.34201 1.34201 1.34201 1.34211 1.34292 1.34211 1.34290 1.34210 1.34290 1.34210 1.34290 1.34210 1.34290 1.34210 1.34290 1.34210 1.34290 1.34210 1.34290 1.34210	15.0  1.34001 1.3397 1.33991 1.33992 1.33991 1.33996 1.33991 1.33801 1.33801 1.33801 1.33801 1.3381 1.3401 1.3381 1.3401 1.3440 1.34423 1.3441 1.4438 1.3438 1.34421 1.34382 1.34388	20.0 1.34100 1.34094 1.34089 1.34089 1.34089 1.34089 1.34089 1.34028 1.34028 1.34028 1.34028 1.34028 1.34028 1.34011 1.33993 1.33911 1.33983 38.0 1.34460 1.34450 1.34450 1.34450 1.34430 1.34451 1.34305 1.34307 1.34308	25.0  1.34201 1.34195 1.34187 1.34181 1.34125 1.34105 1.34067 1.34067 1.34067 1.34063 1.34979 1.34980 1.34480 1.34480 1.34436	1.34301 1.34294 1.34285 1.34248 1.34248 1.34233 1.34216 1.34180 1.34180 1.34181 1.34091 1.34181 1.34091 1.34409 1.34482 1.34489	1.34320 1.34314 1.34305 1.34294 1.34291 1.34252 1.34252 1.34217 1.34198 1.34136 1.34136 1.34136 1.34090 1.34050 1.34520 1.34520 1.34520 1.34520 1.34520 1.34534 1.34474 1.34474 1.34474 1.34474 1.34474 1.34474 1.34385 1.34385 1.34385 1.34385 1.34385 1.34383 1.34381 1.34381 1.343821 1.34298	32.0 1.34340 1.34331 1.34301 1.34284 1.34271 1.34284 1.34236 1.34271 1.34197 1.34197 1.34197 1.34198 1.34508 1.34083 42.0 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34540 1.34581 1.34581 1.34493 1.34493 1.34493 1.34399 1.34393 1.34393 1.34393 1.34393 1.343393 1.343391 1.343393 1.343391	33.0  1.34361 1.34353 1.34344 1.34333 1.34320 1.34320 1.34273 1.34275 1.34276 1.34276 1.34276 1.34175 1.34173 1.34150 1.34560 1.34560 1.34560 1.34560 1.34561 1.34560 1.34577 1.34581 1.34482 1.34482 1.34482 1.34482 1.34388 1.34335

Town and the contractions of the contraction of the

The state of the s

Table A-3. (cont)

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					• •				[Na]	$\lambda = 546.1 \text{ nm}$
THE				84	Libert (*	<del>اس</del> (سا	<del></del> -			
°C	. 0.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.0 '
0.0	1.33565	1.33644	1.33743	1.33042	1.33941	1.34841	1.34140	1.24159	1.34179	1.34199
2.0	1.33543	1.33441	1.33739	1.33036	1.33936	1.34034	1.34132	1.34152	1.34171	1.34191
4.0	1.33539	1.33636	1.33734	1.33631	1.33928	1.34026	1.34123	1.34142	1-34145	1.34181
6.0 2.0	1.33534	1.33430	1.33727	1.33623	1.33920	1.34016	1.34113	1.34132	1.34151	1.34171
10.0	1.33518	1.33613	1.33700	1.33003	1.338%	1.33993	1.34101	1.34120	1.34139	1.34199 1.34145
12.0	1.33507	1.33401	1.33495	1.33709	1.33004	1.33978	1.34072	1.34091	1.34110	1.34129
14.0	1.33494	1.33567	1.33441	1.33775	1.33046	1.33962	1.34055	1.34074	1.34093	1.34111
16.0 18.0	1.33479	1.33572	1.33666	1.33758	1.33051	1.33945	1.34037	1.34056	1.34075	1.34093
20.0	1.33447	1.33539	1.33431	1.33723	1.33015	1.33907	1.34000	1.34018	1.34036	1.34055
22.0	1.33426	1.33520	1.33612	1.33704	1.33795	1.33007	1.33979	1.33997	1.34015	1.34034
24.0 26.0	1.33400	1.33500	1.33591	1.33663	1.33774	1.33045	1.33957	1.33975	1.33994	1.34012
28.0	1.33365	1.33455	1.33547	1.33638	1.33720	1.33019	1.33934	1.33952	1.33971	1.33909 1.33965
30.0	1.33341	1.33432	1.33522	1.33613	1.33704	1.33795	1.33004	1.33904	1.33422	1.33940
	34.0	35.0	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0
							-			1500
0 <b>.0</b> 2 <b>.</b> 0	1.34219	1.34239	1.34259	1.34279		1.34318	1.34336	1.34358	1.34378	1.34398
4.0	1.34201	1.34230	1.34250	1.34270	1.34289	1.34309	1.34328	1.34348	1.34368	1.34367 1.34376
6.0	1.34190	1.34209	1.34228	1.34248	1.34267	1.34286	1.34304	1.34325	1.34344	1.34364
0.0	1.34174	1.34197	1.34216	1.34235	1.34255	1.34273	1.34293	1.34312	1.34331	1.34350
10.0 12.0	1.34164	1.34183	1.34202	1.34221	1.34240	1.34259	1.34278	1.34297	1.34316	1.34335
14.0	1.34148	1.34144	1.34167	1.34204	1.34223	1.34242	1.34261	1.34260	1.34299	1.34317 1.34299
16.0	1.34112	1.34130	1.34149	1.34140	1.34186	1.34205	1.34224	1.34242	1.34261	1.34200
18.0	1.34093	1.34112	1.34130	1.34149	1.34167	1.34180	1.34204	1.34223	1.34241	1.34260
20.0 22.0	1.34073	1.34092	1.34110	1.34129	1.34147	1.34166	1.34184	1.34202	1.34221	1.34239
24.0	1.34030	1.34048	1.34066	1.34107	1.34126	1.34144	1.34142	1.34181	1.34149	i.34217 1.34194
26.0	1.34007	1.34025	1.34043	1.34062	1.34080	1.34098	1.34116	1.34134	1.34153	1.34171
20.0 30.0	1.33983	1.34001	1.34019	1.34038	1.34056	1.34074	1.34092	1.34110	1-34129	1.34147
30.0	1033777	1433411	1.33995	1.34013	1.34031	1.34049	1.34068	1.34086	1.34104	1.34122
					<b>(f)</b>					
					<b>(f)</b>				[16]	λ = <b>577.0 nm</b>
TEMP					LIMITY (0			<del></del>		
TEMP °C	0.0	5.0	10.0	<b>SAI</b> 15.0		/se)	30.0	31.0	[ <b>K</b> r]	λ = <b>577.0 nm</b>
	0.0	5.0 1.33534		15.0	LIMITY (0	25.0			32.0	33.0
0.0 2.0	1.33435	1.33534	1.33632	15.0 1.33731 1.33727	20.0 1.33829 1.33825	25.0 1.33928 1.33923	1.34027 1.34021	1.34046	32.0 1.34046 1.34040	
0.0 2.0 4.0	1.33435 1.33434 1.33430	1.33534 1.33532 1.33527	1.33632 1.33629 1.33624	15.0 1.33731 1.33727 1.33721	20.0 20.0 1.33829 1.33825 1.33818	25.0 1.33928 1.33923 1.33915	1.34027 1.34021 1.34012	1.34946 1.34040 1.34032	32.0 1.34046 1.34040 1.34051	33.0 1.34386 1.34079 1.34070
0.0 2.0 4.0 6.0	1.33435 1.33434 1.33430 1.33425	1.33534 1.33532 1.33527 1.33521	1.33632 1.33629 1.35624 1.33617	15.0 1.33731 1.33727 1.33721 1.33713	20.0 20.0 1.33829 1.33825 1.33818 1.33809	25.0 1.33928 1.33923 1.33915 1.33906	1.34027 1.34021 1.34012 1.34002	1.34046 1.34040 1.34032 1.34021	32.0 1.34044 1.34040 1.34051 1.34040	33.0 1.34-386 1.34-079 1.34-070 1.34-059
0.0 2.0 4.0 4.0 8.0 10.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.33408	1.33534 1.33532 1.3352; 1.33521 1.33512 1.33502	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33692	20.0 1.33829 1.33825 1.33818 1.33809 1.33786	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33881	1.34027 1.34021 1.34012	1.34046 1.34040 1.34032 1.34021 1.34006 1.33994	32.0 1.34046 1.34040 1.34051	33.0 1.34086 1.34079 1.34070
0.0 2.0 4.0 6.0 8.0 10.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.33408 1.33397	1.33534 1.33532 1.3352; 1.33521 1.33512 1.33502	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33692 1.33679	20.0 1.33829 1.33825 1.33818 1.33809 1.33796 1.33786 1.33772	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866	1.34027 1.34021 1.34012 1.34002 1.33909 1.33975 1.33960	1.34046 1.34040 1.34032 1.34021 1.34006 1.33994 1.33979	32.0 1.34066 1.34040 1.34051 1.34040 1.34027 1.34013 1.3 3998	33.0 1.34386 1.34079 1.34070 1.34059 1.34046 1.34032 1.34016
0.0 2.0 4.0 4.0 8.0 10.0 12.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.33408 1.33397 1.33385	1.33534 1.33532 1.33527 1.33521 1.33512 1.33502 1.33491 1.33478	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571	15.0 1.34731 1.33727 1.33721 1.33713 1.33703 1.33692 1.33679	20.0 1.33829 1.33825 1.33818 1.33809 1.33786 1.33786 1.33772 1.33757	25.0 1.33928 1.33923 1.33915 1.33904 1.33864 1.33866 1.33850	1.34027 1.34021 1.34012 1.34002 1.33989 1.33975 1.33960	1.34046 1.34040 1.34032 1.34021 1.34006 1.33994 1.33979	32.0 1.34046 1.34040 1.34051 1.34040 1.34027 1.34013 1.33998 1.339981	33.0 1.34086 1.34079 1.34070 1.34059 1.34046 1.34032 1.34016 1.34010
0.0 2.0 4.0 6.0 8.0 10.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.33408 1.33397	1.33534 1.33532 1.3352; 1.33521 1.33512 1.33502	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33692 1.33679	20.0 1.33829 1.33825 1.33818 1.33809 1.33796 1.33786 1.33772	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866	1.34027 1.34021 1.34012 1.34002 1.33909 1.33975 1.33960	1.34046 1.34040 1.34032 1.34021 1.34006 1.33994 1.33979	32.0 1.34066 1.34040 1.34051 1.34040 1.34027 1.34013 1.3 3998	33.0 1 1.34086 1.34079 1.34070 1.34059 1.34046 1.34032 1.34016
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.333408 1.33397 1.33365 1.33375 1.33338	1.33534 1.33532 1.33527 1.33521 1.33512 1.33502 1.33491 1.33463 1.33447 1.33429	1.33632 1.33624 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33556 1.33539	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33692 1.33679 1.33644 1.33648 1.33641	1.33829 1.33829 1.33825 1.33818 1.33809 1.33798 1.33798 1.33772 1.33771 1.33723 1.33723	25.0 1.33928 1.33923 1.33915 1.33906 1.33896 1.33850 1.33835 1.338796	1.34027 1.34021 1.34012 1.34012 1.33909 1.33975 1.33960 1.33944 1.33924 1.33927	1.34946 1.34040 1.34032 1.34021 1.34006 1.33979 1.33972 1.33982 1.33996	32.0 1.34066 1.34060 1.34051 1.34040 1.34027 1.34013 1.33998 1.33998 1.33998 1.33994 1.33994	33-0  1.34-386  1.34-079  1.34-070  1.34-070  1.34-039  1.34-030  1.34-032  1.34-030  1.34-030  1.33-982  1.33-982  1.33-982
0.0 2.0 4.0 6.0 10.0 12.0 14.0 14.0 18.0 20.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.33408 1.33397 1.33395 1.33370 1.33355 1.33338	1.33534 1.33532 1.3352; 1.33512 1.33512 1.33502 1.33491 1.33478 1.33463 1.33447 1.33447	1.33632 1.33624 1.33624 1.33617 1.33608 1.33597 1.33556 1.33571 1.33556 1.33531 1.33532 1.33532	15.0 1.33731 1.33727 1.33721 1.33703 1.33703 1.33692 1.33694 1.33631 1.33631 1.33631 1.33632	1.33829 1.33829 1.33828 1.33828 1.33709 1.33778 1.33778 1.33774 1.33723 1.33741 1.33723 1.33741	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866 1.33833 1.33815 1.33776 1.33779	1.34027 1.34021 1.34012 1.34002 1.33989 1.33980 1.33944 1.33924 1.33907 1.33887	1.34946 1.34040 1.34032 1.34021 1.34006 1.33979 1.33942 1.33945 1.33906 1.33906	32.0 1.34066 1.34070 1.34070 1.34040 1.34040 1.34013 1.33998 1.33998 1.33998 1.33944 1.33924 1.33903	33-0  1.34-386 1.34-070 1.34-070 1.34-070 1.34-046 1.34-046 1.34-016 1.34-016 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982
0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0	1.33435 1.33434 1.33430 1.33425 1.33417 1.333408 1.33397 1.33365 1.33375 1.33338	1.33534 1.33532 1.33527 1.33521 1.33512 1.33502 1.33491 1.33463 1.33447 1.33429	1.33632 1.33624 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33556 1.33539	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33692 1.33679 1.33644 1.33648 1.33641	1.33829 1.33829 1.33825 1.33818 1.33809 1.33798 1.33798 1.33772 1.33771 1.33723 1.33723	25.0 1.33928 1.33923 1.33915 1.33906 1.33896 1.33850 1.33835 1.338796	1.34027 1.34021 1.34002 1.34002 1.33989 1.33980 1.33944 1.33924 1.33887 1.33884	1.34046 1.34040 1.34021 1.34021 1.34006 1.33994 1.33994 1.33945 1.33906 1.33908 1.33884 1.33884	32.0 1.34066 1.34060 1.34051 1.34040 1.34027 1.34013 1.33998 1.33998 1.33998 1.33994 1.33994	33-0  1.34-386  1.34-079  1.34-070  1.34-070  1.34-039  1.34-030  1.34-032  1.34-030  1.34-030  1.33-982  1.33-982  1.33-982
0.0 2.0 4.0 6.0 8.0 12.0 14.0 16.0 18.0 20.0 24.0 24.0 24.0	1.33435 1.33434 1.33425 1.33427 1.33408 1.33347 1.33370 1.33375 1.33373 1.33373 1.33238	1.33534 1.33532 1.3352; 1.3352; 1.33512 1.33491 1.33478 1.33478 1.33447 1.33447 1.33429 1.33339	1.33432 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33556 1.33539 1.33521 1.33502 1.33451 1.33459	15.0 1.33731 1.33727 1.33713 1.33703 1.33692 1.33648 1.33648 1.33612 1.33593 1.33572 1.335527	1.33829 1.33829 1.33825 1.33818 1.33809 1.33786 1.33772 1.33772 1.33774 1.33723 1.33741 1.33644 1.33643 1.33643	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866 1.33853 1.33853 1.3395 1.33773 1.33773 1.33773	1.34027 1.34021 1.34012 1.34002 1.33089 1.33975 1.33964 1.33964 1.33964 1.33864 1.33864 1.33864 1.338778	1.34046 1.34040 1.34032 1.34021 1.34036 1.33974 1.33975 1.33945 1.33946 1.33844 1.33844 1.33842 1.33846	32.0 1.34046 1.34040 1.34051 1.34027 1.34027 1.34027 1.34023 1.33981 1.33983 1.33944 1.33903 1.33881 1.33888 1.33888 1.33888	33.0 1.34.386 1.340.70 1.340.70 1.340.59 1.340.40 1.340.40 1.340.40 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.338.93 1.338.93
0.0 2.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0	1.33435 1.33434 1.33435 1.33425 1.33417 1.333417 1.33395 1.33375 1.33338 1.33338 1.33338 1.33338	1.33534 1.33521 1.33521 1.33521 1.33502 1.33491 1.33478 1.33447 1.33429 1.33410 1.33410 1.33410	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.335539 1.33521 1.33502 1.3362 1.3362 1.33659	15.0 1.33731 1.33727 1.33723 1.33703 1.33692 1.33694 1.33644 1.33648 1.33631 1.33573 1.33573	20.0 20.0 1.33829 1.33825 1.33818 1.33909 1.33778 1.33778 1.33774 1.33757 1.33764 1.33704 1.33704 1.3364	25.0 1.33928 1.33923 1.33906 1.33906 1.33894 1.33861 1.33850 1.33850 1.33853 1.33776 1.33773 1.33773	1.34027 1.34021 1.34012 1.34002 1.33909 1.33975 1.33940 1.33944 1.33907 1.33864 1.33864 1.33864	1.34046 1.34040 1.34032 1.34002 1.34006 1.33994 1.33992 1.33994 1.33994 1.33984 1.33884 1.33884	32.0 1.34046 1.34050 1.34051 1.34040 1.34027 1.34013 1.33998 1.33998 1.33998 1.33944 1.33903 1.33903 1.33903	33.0 1.34-36 1.34-079 1.34-070 1.34-059 1.34-046 1.34-016 1.34-016 1.34-016 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982
0.0 2.0 4.0 6.0 8.0 12.0 14.0 16.0 18.0 20.0 24.0 24.0 24.0	1.33435 1.33434 1.33436 1.33425 1.33417 1.33408 1.33397 1.33375 1.33375 1.33329 1.33298 1.33229 1.33228	1.33534 1.33532 1.3352; 1.3352; 1.33512 1.33491 1.33478 1.33478 1.33447 1.33447 1.33429 1.33339	1.33432 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33556 1.33539 1.33521 1.33502 1.33451 1.33459	15.0 1.33731 1.33727 1.33713 1.33703 1.33692 1.33648 1.33648 1.33612 1.33593 1.33572 1.335527	1.33829 1.33829 1.33825 1.33818 1.33809 1.33786 1.33772 1.33772 1.33774 1.33723 1.33741 1.33644 1.33643 1.33643	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866 1.33853 1.33853 1.3395 1.33773 1.33773 1.33773	1.34027 1.34021 1.34012 1.34002 1.33089 1.33975 1.33964 1.33964 1.33964 1.33864 1.33864 1.33864 1.338778	1.34046 1.34040 1.34032 1.34021 1.34036 1.33974 1.33975 1.33945 1.33946 1.33844 1.33844 1.33842 1.33846	32.0 1.34046 1.34040 1.34051 1.34027 1.34027 1.34027 1.34023 1.33981 1.33983 1.33944 1.33903 1.33881 1.33888 1.33888 1.33888	33.0 1.34.386 1.340.70 1.340.70 1.340.59 1.340.40 1.340.40 1.340.40 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.338.93 1.338.93
0.0 2.0 4.0 6.0 8.0 12.0 14.0 16.0 18.0 20.0 24.0 24.0 24.0	1.33435 1.33434 1.33425 1.33427 1.33408 1.33347 1.33370 1.33375 1.33373 1.33373 1.33238	1.33534 1.33532 1.3352; 1.3352; 1.33512 1.33491 1.33478 1.33478 1.33447 1.33447 1.33429 1.33339	1.33432 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33556 1.33539 1.33521 1.33502 1.33451 1.33459	15.0 1.33731 1.33727 1.33713 1.33703 1.33692 1.33648 1.33648 1.33612 1.33593 1.33572 1.335527	1.33829 1.33829 1.33825 1.33818 1.33809 1.33786 1.33772 1.33772 1.33774 1.33723 1.33741 1.33644 1.33643 1.33643	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866 1.33853 1.33853 1.3395 1.33773 1.33773 1.33773	1.34027 1.34021 1.34012 1.34002 1.33089 1.33975 1.33964 1.33964 1.33964 1.33864 1.33864 1.33864 1.338778	1.34046 1.34040 1.34032 1.34021 1.34036 1.33974 1.33975 1.33945 1.33946 1.33844 1.33844 1.33842 1.33846	32.0 1.34046 1.34040 1.34051 1.34027 1.34027 1.34027 1.34023 1.33981 1.33983 1.33944 1.33903 1.33881 1.33888 1.33888 1.33888	33.0 1.34.386 1.340.70 1.340.70 1.340.59 1.340.40 1.340.40 1.340.40 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.339.82 1.338.93 1.338.93
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0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 28.0 30.0	1.33435 1.33434 1.33436 1.33425 1.33417 1.333408 1.33395 1.33375 1.33375 1.33379 1.33278 1.33278 1.33273	1.33534 1.33532 1.3352; 1.33512 1.33512 1.33502 1.33478 1.33447 1.33447 1.33440 1.3340 1.33410	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.33556 1.33571 1.33559 1.335539 1.33562 1.33562 1.33461 1.33461 1.33461	15.0 1.33731 1.33727 1.33721 1.33713 1.33703 1.33679 1.33644 1.33648 1.33641 1.33572 1.33572 1.33572 1.33572 1.33572 1.33572	1.33829 1.33829 1.33828 1.33818 1.33798 1.33778 1.33772 1.33774 1.33723 1.33741 1.33644 1.33644 1.33643 1.33647 1.33594	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33866 1.33850 1.33830 1.33835 1.33796 1.33773 1.33773 1.33738 1.33738	1.34027 1.34021 1.34012 1.34002 1.33989 1.33980 1.33940 1.33944 1.33907 1.33884 1.33844 1.33844 1.338798 1.33778	1.34046 1.34040 1.34021 1.34021 1.34026 1.33979 1.33975 1.33945 1.33926 1.33926 1.33842 1.33842 1.33842 1.33816 1.33816	32.0 1.34066 1.34051 1.34020 1.34021 1.34027 1.34021 1.33981 1.33981 1.33903 1.33903 1.33858 1.33858 1.33851	33.0 1.34.386 1.340.70 1.340.70 1.340.59 1.340.46 1.340.46 1.340.40 1.339.82 1.339.82 1.339.82 1.339.82 1.338.79 1.338.79 1.338.79 1.338.79
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0.0 2.0 4.0 8.0 10.0 12.0 14.0 16.0 20.0 22.0 24.0 24.0 28.0 30.0	1.33435 1.33434 1.33436 1.33417 1.33408 1.33397 1.33395 1.33378 1.33329 1.33299 1.33290 1.33293 1.33290 1.34090 1.34090 1.34090 1.34095 1.3409	1.33534 1.33532 1.33522 1.335512 1.335512 1.335478 1.33478 1.33463 1.33462 1.33410 1.33340 1.33340 1.33323 35.0 1.34125 1.34109 1.3409 1.34085 1.34070 1.34085 1.34037 1.34019	1.33632 1.33629 1.33624 1.33608 1.33597 1.23565 1.33557 1.33559 1.33552 1.33509 1.33509 1.33413 36.0 1.3413 1.3413 1.3413 1.3413 1.3413 1.3413 1.3403	15.0 1.33731 1.33727 1.33713 1.33703 1.33692 1.33648 1.33648 1.33612 1.33573 1.33572 1.33572 1.33557 1.34165 1.34165 1.34165 1.34168 1.34108 1.34034 1.34034 1.34034 1.34034 1.34034 1.34034 1.34034	20.0 1.33829 1.33829 1.33825 1.33808 1.33798 1.33778 1.33778 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33784 1.33640 1.33640 1.3467 1.34167 1.34167 1.34167 1.34184 1.34177 1.34167 1.34167 1.34167 1.34167 1.34073 1.34073 1.34074 1.34074	25.0 1.33928 1.33923 1.33906 1.33894 1.33864 1.33865 1.33796 1.33753 1.33773 1.33773 1.33773 1.33773 1.34175 1.34176 1.34176 1.34176 1.34176 1.34176 1.34171 1.34093 1.34073 1.34073 1.34073	1.34027 1.34021 1.34012 1.33989 1.33975 1.33960 1.33944 1.33907 1.33884 1.33864 1.33884 1.33775 40.0 1.34223 1.34216 1.34206 1.34216 1.34216 1.34216 1.34218 1.34180 1.34184 1.34184	1.34946 1.34040 1.34021 1.34026 1.33979 1.33979 1.33982 1.33986 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.33884 1.34236	32.0  1.34046 1.34040 1.34040 1.34021 1.34021 1.34021 1.33981 1.33984 1.33981 1.33981 1.33981 1.33981 1.33818 1.33818 1.33818 1.33818 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281 1.34281	33.0  1.34-386 1.34-070 1.34-070 1.34-070 1.34-046 1.34-032 1.34-046 1.34-032 1.33-082 1.33-0
0.0 2.0 4.0 8.0 10.0 14.0 16.0 20.0 22.0 24.0 24.0 24.0 24.0 24.0 30.0	1.33435 1.33430 1.33425 1.33417 1.33408 1.33397 1.33395 1.33378 1.33233	1.33534 1.33521 1.33521 1.33512 1.33502 1.33491 1.33447 1.33447 1.33429 1.33410 1.33390 1.33390 1.33390 1.34112 1.34118 1.34098 1.3408 1.34098 1.34098 1.34099 1.34099 1.33999 1.33999	1.33632 1.33629 1.33629 1.33621 1.33608 1.33597 1.33565 1.33539 1.33521 1.33539 1.33521 1.33461 1.33461 1.33461 1.34138 36.0 1.34145 1.34138 1.34129 1.3413 1.34039 1.34039 1.34037 1.34037 1.34037 1.34037 1.34018 1.34037 1.34018	15.0  1.34731 1.33727 1.33721 1.33713 1.33703 1.33492 1.33649 1.33648 1.33531 1.33572 1.335527 1.335527 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34076 1.34076 1.34076 1.34076 1.34076	20-0 1.33829 1.33829 1.33829 1.33809 1.33798 1.33798 1.33772 1.33771 1.33774 1.33763 1.33763 1.33663 1.33663 1.33663 1.33663 1.33663 1.34167 1.34167 1.34167 1.34167 1.3417 1.34167 1.34167 1.34194 1.34093 1.34095 1.34095 1.34035 1.34035	25.0 1.33928 1.33923 1.33906 1.33894 1.33886 1.33830 1.33835 1.33773 1.33773 1.33778 1.33778 1.34175 1.34175 1.34175 1.34187 1.34187 1.34187 1.34187 1.34187	1.34027 1.34021 1.34012 1.34012 1.33989 1.33989 1.33960 1.33960 1.33967 1.33864 1.33864 1.33864 1.338778 1.338775 40.0 1.34226 1.34216	1.34946 1.34040 1.34032 1.34026 1.33994 1.33992 1.33942 1.33946 1.33842 1.33842 1.33843 1.34236 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34199 1.34183 1.34190 1.34183 1.34180 1.34190 1.34089	32.0 1.34046 1.34040 1.34051 1.34027 1.34013 1.33998 1.33998 1.33998 1.33993 1.33993 1.33903 1.33903 1.33818 1.33858 1.33851 42.0 1.34263 1.3425 1.3428 1.3428 1.3428 1.34185 1.34185 1.34187 1.34187	33.0  1.34-386 1.34-070 1.34-070 1.34-070 1.34-090 1.34-090 1.34-090 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-879 1.33-879 1.33-879 1.33-879 1.33-879 1.33-879 1.34-283 1.34-285 1.34-2
0.0 2.0 4.0 8.0 10.0 14.0 16.0 20.0 22.0 24.0 28.0 28.0 30.0 0.0 12.0 14.0 16.0 20.0 21.0	1.33435 1.33434 1.33436 1.33417 1.33408 1.33397 1.33395 1.33375 1.333299 1.33229 1.33233 34.0 1.34105 1.34099 1.34099 1.34090 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091 1.34091	1.33534 1.3352; 1.3352; 1.33512 1.33512 1.33502 1.33401 1.3343 1.33447 1.3343 1.33447 1.3343 1.33440 1.33323 35.0 1.34125 1.3410 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409 1.3409	1.33632 1.33629 1.33624 1.33617 1.33608 1.33597 1.23565 1.33571 1.33554 1.33539 1.33521 1.3361 1.33437 1.34138 1.34038	15.0  1.34731 1.33727 1.33723 1.33703 1.33479 1.33649 1.33641 1.33593 1.33572 1.33572 1.33572 1.33572 1.33572 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34166 1.34036 1.34036 1.34036 1.34036 1.34036 1.34036 1.34036	1.33829 1.33829 1.33829 1.33818 1.33798 1.33778 1.33771 1.3377	25.0 1.33928 1.33923 1.33915 1.33906 1.33831 1.33866 1.33835 1.33731 1	1.34027 1.34021 1.34012 1.34012 1.33989 1.33989 1.33980 1.33980 1.33984 1.33907 1.33884 1.33822 1.33775 40.0 1.34223 1.34216 1.34206 1.34194 1.34194 1.34194 1.34194 1.34194 1.34194 1.34014 1.34014 1.34014 1.34070 1.34040	1.34946 1.34040 1.34032 1.34026 1.34026 1.33979 1.33942 1.33945 1.33926 1.33840 1.33841 1.33841 1.33843 1.34236 1.3423	32.0  1.34066 1.34060 1.34051 1.34060 1.34027 1.34013 1.33998 1.33998 1.33998 1.33981 1.33981 1.33981 1.33981 1.33981 1.33981 1.33981 1.33981 1.33981 1.33858 1.33851 1.34851 1.34851 1.34851 1.34187 1.34188 1.34187 1.34188 1.34187 1.34188	33.0  1.34-386 1.34-079 1.34-070 1.34-079 1.34-059 1.34-032 1.34-016 1.34-016 1.34-016 1.33-092 1.33-022 1.33-022 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.33-038-79 1.34-038-1 1.34-038-1 1.34-038-1 1.34-038-1 1.34-
0.0 2.0 4.0 8.0 10.0 14.0 16.0 20.0 22.0 24.0 24.0 24.0 24.0 24.0 30.0	1.33435 1.33430 1.33425 1.33417 1.33408 1.33397 1.33395 1.33378 1.33233	1.33534 1.33521 1.33521 1.33512 1.33502 1.33491 1.33447 1.33447 1.33429 1.33410 1.33390 1.33390 1.33390 1.34112 1.34118 1.34098 1.3408 1.34098 1.34098 1.34099 1.34099 1.33999 1.33999	1.33632 1.33629 1.33629 1.33621 1.33608 1.33597 1.33565 1.33539 1.33521 1.33539 1.33521 1.33461 1.33461 1.33461 1.34138 36.0 1.34145 1.34138 1.34129 1.3413 1.34039 1.34039 1.34037 1.34037 1.34037 1.34037 1.34018 1.34037 1.34018	15.0  1.34731 1.33727 1.33721 1.33713 1.33703 1.33492 1.33649 1.33648 1.33531 1.33572 1.335527 1.335527 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34165 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34166 1.34076 1.34076 1.34076 1.34076 1.34076	20.0 1.33829 1.33825 1.33808 1.33798 1.33778 1.33778 1.33778 1.33774 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33883 1.33683 1.33683 1.33683 1.33683 1.33683 1.33683 1.33683 1.34184 1.34187 1.3418	25.0 1.33928 1.33923 1.33915 1.33906 1.33894 1.33886 1.33850 1.33815 1.33776 1.33773 1.33778 1.33778 1.34175 1.34194 1.34187 1	1.34027 1.34021 1.34012 1.34012 1.33989 1.33989 1.33960 1.33960 1.33967 1.33864 1.33864 1.33864 1.338778 1.338775 40.0 1.34226 1.34216	1.34946 1.34040 1.34032 1.34026 1.33994 1.33992 1.33942 1.33946 1.33842 1.33842 1.33843 1.34236 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34234 1.34199 1.34183 1.34190 1.34183 1.34180 1.34190 1.34089	32.0 1.34046 1.34040 1.34051 1.34027 1.34013 1.33998 1.33998 1.33998 1.33993 1.33993 1.33903 1.33903 1.33818 1.33858 1.33851 42.0 1.34263 1.3425 1.3428 1.3428 1.3428 1.34185 1.34185 1.34187 1.34187	33.0  1.34-386 1.34-070 1.34-070 1.34-070 1.34-090 1.34-090 1.34-090 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-879 1.33-879 1.33-879 1.33-879 1.33-879 1.33-879 1.34-283 1.34-285 1.34-2
0.0 2.0 4.0 4.0 12.0 14.0 16.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 1	1.33435 1.33434 1.33436 1.33417 1.33408 1.33397 1.33395 1.33378 1.33329 1.33296 1.33233 34.0 1.34105 1.34099 1.34099 1.34099 1.34085 1.34085 1.34085 1.34085 1.34085 1.34086 1.34086 1.34086 1.34086 1.34088 1.34088 1.34088 1.34089 1.34088 1.34088 1.34088 1.34089 1.34088 1.34089 1.34089 1.34088 1.34088 1.34089 1.34089 1.34088 1.34089 1.34088 1.34089 1.34088 1.34088 1.34089 1.34088 1.33981 1.33981 1.33981	1.33534 1.33532 1.33522 1.33512 1.33512 1.335478 1.33463 1.33463 1.3346 1.3340 1.33340 1.33340 1.33340 1.33323 35.0 1.3418 1.3418 1.3409	1.33632 1.33629 1.33624 1.33608 1.33597 1.23565 1.33551 1.33552 1.33552 1.33521 1.33413 36.0 1.3413 36.0 1.3413 1.3413 1.3413 1.3413 1.3413 1.3403 1.	15.0 1.34731 1.33727 1.33713 1.33703 1.33679 1.33649 1.33649 1.33641 1.33593 1.33572 1.33557 1.33557 1.34165 1.34074 1.34074 1.33974 1.33974	20.0 1.33829 1.33825 1.33808 1.33798 1.33778 1.33778 1.33778 1.33774 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33781 1.33883 1.33683 1.33683 1.33683 1.33683 1.33683 1.33683 1.33683 1.34184 1.34187 1.3418	25.0 1.33928 1.33923 1.33956 1.33894 1.33866 1.33866 1.33853 1.33853 1.33753 1.33773 1.33778 1.33778 1.34179 1.34179 1.34179 1.34179 1.34171 1.34093 1.34093 1.34003 1.34003 1.34003 1.34003 1.34003 1.34003 1.34003	1.34027 1.34021 1.34002 1.33989 1.33975 1.33960 1.33944 1.33924 1.33927 1.33864 1.33864 1.33864 1.33822 1.33775 40.0 1.34216 1.34216 1.34216 1.34216 1.34180 1.34180 1.34181 1.340181 1.340181 1.340181 1.340181 1.340181 1.340181 1.340181 1.340181	1.34946 1.34040 1.34021 1.34026 1.33974 1.33975 1.33985 1.33986 1.33986 1.33986 1.33880 1.33881 1.33881 1.33881 1.34236 1.3423	32.0 1.34046 1.34040 1.34040 1.34021 1.34021 1.34021 1.33981 1.33981 1.33984 1.33984 1.33981 1.33881 42.0 1.34283 1.34281 1.34283 1.34281	33.0  1.34-386 1.34-070 1.34-070 1.34-070 1.34-099 1.34-046 1.34-032 1.34-046 1.34-032 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-982 1.33-876 1.33-879 1.33-879 1.33-879 1.33-879 1.34-283 1.34-2

Table A-3, (cent)

					(8)				[Ha]	$\lambda = 579.1 \text{ nm}$
TEMP				<b>3A</b>	LHRIY (	<b>/</b>			1.47	
°C	•.0	5.0	10.0	15.0	20.0	25.0	30.0	31.0	32.0	33.6
0.0	1.33428	1.33527	1.33625	1.33724			1.34020	1.34039	1.34059	1.3407#
2.0 4.0	1.33427	1.33925	1.33622	1.33720	1.33016	1.33914	1.34013	1.34033	1.34052	1.34072
4.0	1.33418	1.33514	1.33410	1.33706	1.33003	1.33099	1.33945	1.34014	1.34033	1.34053
	1.33411	1.33504	1.33402	1.33697	1.33792	1.33000	1.33903	1.34002	1.34021	1.34640
10.0 12.0	1.33402	1.33494	1.33591	1.33466	1.33766	1.33075	1.33969	1.33966	1.34007	1.34026
14.0	1.33378	1.33471	1.33564	1.33657	1.33751	1.33044	1.33937	1.33955	1.33974	1.33993
16.0	1.33364	1.33454	1.33549	1.33441	1.33734	1.33624	1.33919	1.33937	1.33956	1.33974
16.0	1.33348	1.33440	1.33532	1.33624	1.33716	1.33606	1.33900	1.33918	1.33937	1.33955 1.33935
20.0 22.0	1.33331	1.33403	1.33514	1.33506	1.33677	1.33768	1.33000	1.33877	1.33096	1.33914
24.0	1.33292	1.33303	1.33474	1.33565	1.33656	1.33747	1.33837	1,33056	1.33674	1.33092
26.0	1.33271	1.33362	1.33452	1.33543	1.33634	1.33724	1.33015	1.33633	1.33051	1.33069
28.0 30.0	1.33249	1.33339	1.33430	1.33520	1.33611	1.33701	1.33791	1.33009	1.33420	1.33046 1.33022
3000	1000010								200 200	
	34.0	35.0	34.0	37.0	36.0	39.0	40.0	41.0	42.0	43.0
c.o	1.34098	1.34118	1.34138		1.34177		1.34217	1.342.56	1.34256	1.34276
2.0 4.0	1.34092	1.34111	1.34131	1.34156	1.34170	1.34187	1.34209	1.34228	1.34248	1.34267 1.34257
6.0	1.34072	1.34091	1.34110	1.34129	1.34149	1.34168	1.34187	1.34206	1.34224	1.34245
8.0	1.34059	1.34076	1.34097	1.34116	1.34136	1.34155	1.34273	1.34193	1.34212	1.34231
10.0	1.34045	1.34064	1.34063	1.34102	1.34121	1.34139	1.34158	1.34177	1.34196	1.34215
12.0 14.0	1.34029	1.34048	1.34066	1.34085	1.34086	1.34123	1.34141	1.34160	1.34179	1.34198
16.0	1.33993	1.34012	1.34030	1.34049	1.34047	1.34000	1.34104	1.34123	1.34141	1.34160
18.0	1.33974	1.33942	1.34011	1.34029	1.34047	1.34066	1.34084	1.34103	1.34121	1.34140
20.0	1.33954	1.33972	1.33990	1.34009	1.34027	1.34045	1.34063	1.340#2	1.34100	1.34118 1.34096
22.0 24.0	1.33910	1.33951	1. 33946	1.33965	1.33983	1.34001	1.34019	1.34037	1.34056	1.34074
26.0	1.33667	1.33905	1.33923	1.33942	1.33960	1.33974	1.33996	1.34014	1.34032	1.34650
28-0	1.33664	1-33082	1.33900	1.33418	1.33936	1.33954	1.33972	1.33990	1.34009	1.34027
30.0	1.33840	1.33650	1.33876	1.33894	1.33712	1.33430	1.33948	1.33966	1.33904	1.34002
				_	(h)				[Na]	λ = <b>589.3 nm</b>
TEMP					Timaa (					
°C	0.0	5.0	10.0	15.0	50.0 FINELA (6	25.0	30.0	31.0	32.0	33.0
°c	1.33395	1.33494	1.33592	15.0 1.33690	20.0 1.33709	25.0 1.33867	1.33986	1.34004	32.0	33.0
°C				15.0	50.0 FINELA (6	25.0			32.0	33.0
0.0 2.0 4.0 4.0	1.33395 1.33294 1.33390 1.33365	1.33494 1.33491 1.33487 1.33481	1.33592 1.33589 1.33584 1.33577	15.0 1.33690 1.33687 1.33681 1.33673	20.0 1.33749 1.33764 1.33778 1.33769	25.0 1.33887 1.33882 1.33874 1.33865	1.33986 1.33979 1.33971 1.33961	1.34006 1.33999 1.33991 1.33980	32.0 1.34025 1.34019 1.34010 1.34000	33.0 1.34045 1.34038 1.34029 1.34019
0.0 2.0 4.0 6.0	1.33395 1.33294 1.33390 1.33385 1.33378	1.33494 1.33491 1.33487 1.33481 1.33473	1.33592 1.33589 1.33584 1.33577 1.33568	15.0 1.33690 1.33687 1.33681 1.33673 1.33663	20.0 1.33789 1.33784 1.33778 1.33769 1.33759	25.0 1.33887 1.33882 1.33874 1.33865 1.33854	1.33986 1.33979 1.33971 1.33961 1.33949	1.34006 1.33999 1.33991 1.33980 1.33968	32.0 1.34025 1.34019 1.34010 1.34000 1.33987	33.0 1.36045 1.34038 1.34029 1.34019 1.34006
0.0 2.0 4.0 4.0	1.33395 1.33294 1.33390 1.33365	1.33494 1.33491 1.33487 1.33481	1.33592 1.33589 1.33584 1.33577	15.0 1.33690 1.33687 1.33681 1.33673	20.0 1.33749 1.33764 1.33778 1.33769	25.0 1.33887 1.33882 1.33874 1.33865 1.33854 1.33841	1.33986 1.33979 1.33971 1.33961 1.33949 1.33935	1.34006 1.33999 1.33991 1.33980	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33973	33.0 1.34045 1.34038 1.34029 1.34019
0.0 2.0 4.0 6.0 8.0 10.0 12.0	1.33395 1.33294 1.33390 1.33365 1.33369 1.33358 1.33346	1.33494 1.33491 1.33487 1.33487 1.33473 1.33463 1.33452	1.33592 1.33589 1.33584 1.33568 1.33558 1.33545 1.33545	15.0 1.33690 1.33687 1.33681 1.33663 1.33652 1.33639 1.33639	20.0 1.33789 1.33784 1.33778 1.33759 1.33759 1.33759 1.33743 1.33717	25.0 1.33887 1.33882 1.33874 1.33854 1.33841 1.33824 1.33810	1.33986 1.33979 1.33971 1.33949 1.33949 1.33920 1.33920	1.34006 1.33999 1.33991 1.33968 1.33954 1.33939	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33957 1.33957	33.0 1.34045 1.34038 1.34029 1.34019 1.34006 1.33972 1.33976 1.339759
0.0 2.0 4.0 6.0 6.0 10.0 12.0 14.0	1.33395 1.33294 1.33390 1.33365 1.33378 1.33359 1.333346 1.33331	1.33494 1.33491 1.33487 1.33481 1.33463 1.33452 1.33452 1.33458	1.33592 1.33589 1.33584 1.33558 1.33558 1.33558 1.33558	15.0 1.33690 1.33681 1.33673 1.33663 1.33652 1.33652 1.33652 1.33608	20.0 1.33789 1.33784 1.33778 1.33779 1.33759 1.33759 1.33733 1.33717 1.33700	25.0 1.33887 1.33882 1.33874 1.33865 1.33841 1.33841 1.33810 1.33793	1.33986 1.33979 1.33971 1.33961 1.33935 1.33920 1.33903 1.33885	1.34006 1.33999 1.33991 1.33960 1.33954 1.33954 1.33939 1.33922	32.0 1.34025 1.34019 1.34010 1.34000 1.33977 1.33957 1.33950 1.33940	33.0 1.34045 1.34038 1.34029 1.34019 1.34006 1.33972 1.33974 1.33979
0.0 2.0 4.0 6.0 6.0 10.6 12.0 14.0 16.0	1.33395 1.33294 1.33390 1.33365 1.33369 1.33358 1.33346	1.33494 1.33491 1.33487 1.33487 1.33473 1.33463 1.33452	1.33592 1.33589 1.33584 1.33568 1.33558 1.33545 1.33545	15.0 1.33690 1.33687 1.33681 1.33663 1.33652 1.33639 1.33639	20.0 1.33789 1.33784 1.33778 1.33759 1.33759 1.33759 1.33743 1.33717	25.0 1.33887 1.33882 1.33874 1.33854 1.33841 1.33824 1.33810	1.33986 1.33979 1.33971 1.33949 1.33949 1.33920 1.33920	1.34006 1.33999 1.33991 1.33968 1.33954 1.33939	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33957 1.33957	33.0 1.34045 1.34038 1.34029 1.34019 1.34006 1.33972 1.33976 1.339759
0.0 2.0 4.0 6.0 6.0 12.0 14.0 14.0 18.0 20.0 22.0	1.33395 1.33390 1.33395 1.33378 1.33378 1.33358 1.33331 1.33316 1.33391	1.33494 1.33491 1.33481 1.33481 1.33493 1.33462 1.33498 1.33498 1.33408 1.33390	1.33592 1.33589 1.33584 1.33568 1.33568 1.33565 1.33565 1.33561 1.33461 1.33461	15.0 1.33690 1.33687 1.33681 1.33673 1.33663 1.33652 1.3369 1.3369 1.33573 1.33573 1.33573	20.0 1.33789 1.33784 1.33789 1.33789 1.33759 1.33759 1.33753 1.33717 1.33700 1.33603 1.33603	25.0 1.33887 1.33882 1.33874 1.33965 1.33961 1.33928 1.33910 1.33773 1.33775 1.33755	1.33996 1.33979 1.33971 1.33961 1.33949 1.33920 1.33923 1.33845 1.33847 1.33847	1.3400 1.3399 1.33991 1.33980 1.3396 1.3395 1.3393 1.3393 1.3394 1.33885 1.33844	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33957 1.33940 1.33940 1.33940 1.33940 1.33882	33.0  1.34045 1.34038 1.34029 1.34029 1.34006 1.33992 1.33974 1.33959 1.33951 1.33921 1.33921 1.33901
0.0 2.0 4.0 6.0 8.0 10.6 12.0 14.0 18.0 20.0 27.0	1.33395 1.33390 1.33390 1.33378 1.33349 1.33358 1.33331 1.33310 1.33290 1.33280 1.33280	1.33494 1.33487 1.33481 1.33473 1.33452 1.33452 1.33458 1.33458 1.333408 1.333408 1.33371 1.33351	1.33592 1.33589 1.33584 1.33578 1.33568 1.33558 1.33558 1.33556 1.33516 1.33516 1.33462 1.33462	15.0 1.33490 1.33481 1.33481 1.33483 1.33463 1.33608 1.33591 1.33571 1.33573 1.33533	20.0 1.33789 1.33784 1.33778 1.33779 1.33759 1.33759 1.33717 1.33717 1.33717 1.33700 1.33683 1.33644 1.33644	25.0 1.33887 1.33862 1.33854 1.33854 1.33861 1.33828 1.3381 1.33774 1.33775 1.33773	1.33996 1.33979 1.33961 1.33991 1.33995 1.33920 1.3393 1.33885 1.33886 1.33846 1.33846	1.34004 1.33999 1.33991 1.33980 1.33954 1.33954 1.33955 1.33955 1.33955 1.33965 1.33865 1.33864	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33957 1.33940 1.33923 1.3393 1.33863 1.33863	33.0 1.34045 1.34038 1.34029 1.34019 1.34006 1.33972 1.33974 1.33974 1.33951 1.33901 1.33800 1.33858
0.0 2.0 4.0 4.0 6.0 10.0 12.0 14.0 16.0 20.0 27.0 24.0 24.0	1.33395 1.33294 1.33390 1.333370 1.33349 1.333346 1.333346 1.333346 1.333299 1.33290 1.33280	1.33494 1.33491 1.33481 1.33481 1.33493 1.33462 1.33498 1.33498 1.33408 1.33390	1.33592 1.33584 1.33584 1.33568 1.33568 1.33558 1.33558 1.33518 1.3351 1.33499 1.33441 1.33442	15.0 1.33490 1.33687 1.33681 1.33681 1.33683 1.33682 1.33694 1.33591 1.33591 1.33593 1.33593 1.33593	20.0 1.33789 1.33784 1.33789 1.33789 1.33759 1.33759 1.33753 1.33717 1.33700 1.33603 1.33603	25.0 1.33887 1.33882 1.33874 1.33965 1.33961 1.33928 1.33910 1.33773 1.33775 1.33755	1.33996 1.33979 1.33971 1.33961 1.33949 1.33920 1.33923 1.33845 1.33847 1.33847	1.34004 1.33999 1.33991 1.33990 1.33954 1.33954 1.33952 1.33905 1.33905 1.33845 1.33845 1.33845	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33957 1.33940 1.33940 1.33940 1.33940 1.33882	33.0  1.34045 1.34038 1.34029 1.34029 1.34006 1.33992 1.33974 1.33959 1.33951 1.33921 1.33921 1.33901
0.0 2.0 4.0 6.0 8.0 10.6 12.0 14.0 18.0 20.0 27.0	1.33395 1.33294 1.33390 1.33369 1.33369 1.33346 1.33331 1.33316 1.33230 1.33280 1.33280 1.33280	1.33494 1.33491 1.33487 1.33481 1.33473 1.33452 1.33452 1.33458 1.33408 1.33390 1.33371 1.33371	1.33592 1.33589 1.33584 1.33578 1.33568 1.33558 1.33558 1.33556 1.33516 1.33516 1.33462 1.33462	15.0 1.33490 1.33481 1.33481 1.33483 1.33463 1.33608 1.33591 1.33571 1.33573 1.33533	20.0 1.33789 1.33784 1.33789 1.33789 1.33759 1.33759 1.33753 1.33711 1.33700 1.33643 1.33644 1.33643 1.33641 1.33673 1.33578	25.0 1.33887 1.33882 1.33874 1.33865 1.33861 1.33861 1.33774 1.33775 1.33775 1.33735 1.33713 1.33801	1.33996 1.33979 1.33971 1.33961 1.33949 1.33925 1.33926 1.33885 1.33884 1.33884 1.33864 1.33804 1.33758	1.34004 1.33999 1.33991 1.33980 1.33954 1.33954 1.33955 1.33955 1.33955 1.33965 1.33865 1.33864	32.0 1.34025 1.34019 1.34010 1.34010 1.33987 1.33957 1.33957 1.33923 1.33883 1.33882 1.33882 1.33882	33.0 1.34045 1.34038 1.34029 1.34019 1.34006 1.33992 1.33974 1.33959 1.33941 1.33921 1.33901 1.33850 1.33858 1.33858
0.0 2.0 4.0 6.0 6.0 12.0 14.0 14.0 18.0 20.0 24.0 24.0 24.0	1.33395 1.33294 1.33390 1.33369 1.33369 1.33346 1.33331 1.33316 1.33230 1.33280 1.33280 1.33280	1.33494 1.33491 1.33493 1.33493 1.33493 1.33498 1.33498 1.33498 1.33390 1.33371 1.33391 1.33391 1.33391	1.33592 1.33584 1.33588 1.33558 1.33568 1.33568 1.33568 1.33561 1.33531 1.33511 1.33481 1.33462 1.33441 1.33420 1.33420	15.0 1.33490 1.33487 1.33483 1.33463 1.33463 1.33463 1.33463 1.33463 1.33591 1.33573 1.33573 1.33573 1.33533 1.33513 1.33513 1.33513 1.33513	20.0 1.33789 1.33784 1.33781 1.33789 1.33759 1.33759 1.33753 1.33717 1.33700 1.33603 1.33644 1.33641 1.33641 1.33671 1.33671	25.0 1.33667 1.33882 1.33874 1.33865 1.33864 1.33864 1.33870 1.33774 1.33775 1.33775 1.33735 1.33735 1.33735	1.33996 1.33979 1.33971 1.33961 1.33949 1.33925 1.33926 1.33885 1.33884 1.33884 1.33864 1.33804 1.33758	1.34004 1.33999 1.33991 1.33946 1.33954 1.33954 1.33904 1.33845 1.33844 1.33822 1.33774	32.0 1.34025 1.34019 1.34010 1.34000 1.33987 1.33973 1.33920 1.33922 1.33903 1.33862 1.33862 1.338640 1.33817	33.0  1.34045 1.34038 1.34029 1.34029 1.34000 1.33992 1.33974 1.33951 1.33921 1.33921 1.33921 1.33980 1.33880 1.33888 1.33888 1.33888
0.0 2.0 4.0 6.0 10.0 12.0 14.0 14.0 20.0 27.0 24.0 24.0 28.0 30.0	1.33395 1.33294 1.33385 1.33378 1.33358 1.33346 1.33331 1.33316 1.33299 1.33299 1.33239 1.33217 1.33217	1.33494 1.33491 1.33487 1.33483 1.33493 1.33498 1.33498 1.33390 1.33371 1.33391 1.33391 1.33391	1.33592 1.33589 1.33587 1.33558 1.33558 1.33558 1.33558 1.33549 1.33499 1.33491 1.33491 1.33491 1.33491 1.33491	15.0 1.33490 1.33687 1.33681 1.33683 1.33692 1.33692 1.33698 1.33591 1.33591 1.33591 1.33591 1.33592 1.33593 1.33593 1.33593 1.33593	20.0 1.33789 1.33784 1.33781 1.33781 1.33781 1.33781 1.33759 1.33717 1.33700 1.33803 1.33604 1.33604 1.33678 1.33578 1.33578	25.0 1.33887 1.33882 1.33874 1.33865 1.33861 1.33824 1.33810 1.33774 1.33775 1.33775 1.33775 1.33713 1.3364 1.33644	1.33996 1.33979 1.33941 1.33949 1.33949 1.33920 1.33903 1.33845 1.33847 1.33826 1.33841 1.33734	1.34004 1.33999 1.33991 1.33948 1.33954 1.33954 1.33952 1.33905 1.33885 1.32865 1.33885 1.33882 1.33879 1.33776	32.0 1.34025 1.34010 1.34010 1.33987 1.33973 1.33973 1.33903 1.33903 1.33862 1.33862 1.33867 1.33770 42.0	33.0  1.34045 1.34038 1.34029 1.34019 1.34019 1.34006 1.33972 1.33974 1.33972 1.33974 1.33921 1.33901 1.33880 1.33880 1.33683 1.33683 1.33788
0.0 2.0 4.0 4.0 6.0 10.6 12.0 14.0 18.0 22.0 24.0 24.0 24.0 26.0	1.33395 1.33294 1.33390 1.33378 1.33378 1.33358 1.33358 1.33316 1.33299 1.33280 1.33217 1.33194	1.33494 1.33497 1.33487 1.33487 1.33493 1.33492 1.33498 1.33390 1.33371 1.33351 1.33357 1.33357 1.33368 1.33408	1.33592 1.33589 1.33588 1.33568 1.33568 1.335545 1.33551 1.33516 1.33461 1.33462 1.33461 1.33462 1.33347 1.33374	15.0 1.33690 1.33687 1.33687 1.33683 1.33652 1.33639 1.33624 1.33691 1.33591 1.33591 1.33591 1.33591 1.33592 1.33592 1.33484 37.0 1.34124 1.34114	20.0 1.33789 1.33789 1.33789 1.33778 1.33769 1.33759 1.33759 1.33717 1.33700 1.33604 1.33604 1.33643 1.33578 1.33554	25.0 1.33887 1.33882 1.33874 1.33845 1.33845 1.33822 1.33910 1.33773 1.33775 1.33775 1.33773 1.33733 1.33644 39.0 1.34163 1.34163	1.33996 1.33979 1.33971 1.33949 1.33949 1.33993 1.33885 1.338847 1.338847 1.33878 1.33758 1.33758 1.33758 1.33758	1.34004 1.33999 1.33991 1.33948 1.33954 1.33954 1.33922 1.33905 1.33885 1.33885 1.33885 1.33885 1.33879 1.33774 1.33775 41.0	32.0 1.34025 1.34010 1.34010 1.34000 1.33987 1.33947 1.33947 1.33940 1.33940 1.33940 1.33840 1.33847 42.0 1.34222 1.34222	33.0  1.34045 1.34038 1.34029 1.34019 1.34006 1.33992 1.33976 1.33991 1.33991 1.33981 1.33981 1.33880 1.33858 1.33858 1.33878  43.0 1.34241 1.34233
0.0 2.0 4.0 4.0 6.0 10.0 12.0 14.0 14.0 18.0 22.0 24.0 24.0 24.0 27.0 30.0	1.33395 1.33294 1.33380 1.33378 1.33378 1.33358 1.333346 1.33331 1.33310 1.33299 1.33290 1.33239 1.33217 1.33217 1.33217 1.33194	1.33494 1.33491 1.33487 1.33483 1.33493 1.33493 1.33498 1.33390 1.33371 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391	1.33592 1.33589 1.33587 1.33558 1.33558 1.33558 1.33549 1.33499 1.33441 1.33420 1.33420 1.3347 1.33374	15.0 1.33490 1.33687 1.33687 1.33683 1.33662 1.33608 1.33573 1.33573 1.33573 1.33573 1.33573 1.33573 1.335847 1.33444 37.0	20.0 1.33789 1.33784 1.33781 1.33781 1.33781 1.33781 1.33759 1.33717 1.33700 1.33604 1.33604 1.33678 1.33578 1.33578 1.33554	25.0 1.33887 1.33882 1.33874 1.33854 1.33854 1.33810 1.33793 1.33774 1.33775 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.33793 1.34173 1.34163 1.34163 1.34163	1.33996 1.33979 1.33949 1.33949 1.33949 1.33920 1.33903 1.33845 1.33847 1.33826 1.33841 1.33734 40.0	1.34004 1.33999 1.33991 1.33948 1.33954 1.33954 1.33992 1.33905 1.33885 1.32865 1.33842 1.33799 1.33776 1.33775 41.0	32.0 1.34025 1.34010 1.34010 1.33987 1.33973 1.33922 1.33903 1.33862 1.33862 1.33867 42.0 1.34222 1.34224 1.34224	33.0  1.34045 1.34038 1.34029 1.34019 1.34006 1.33992 1.33974 1.33959 1.33941 1.33921 1.33980 1.33880 1.33881 1.33883 1.33883 1.33883 1.33883 1.33883 1.34241 1.34241 1.34233 1.34223
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0.0 2.0 4.0 4.0 10.0 10.0 12.0 14.0 18.0 20.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 20.0	1.33395 1.33294 1.33390 1.33378 1.33378 1.33378 1.33394 1.33316 1.33240 1.332217 1.33217 1.33194 1.34064 1.34069 1.34069 1.34069 1.34069 1.34069 1.34070 1.34091 1.33990 1.33990 1.33990 1.33990 1.33991 1.33991	1.33494 1.33491 1.33491 1.33493 1.33493 1.33493 1.33498 1.333498 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33391 1.33938	1.33592 1.33589 1.33568 1.33558 1.33556 1.33551 1.33561 1.33561 1.33461 1.33441 1.33441 1.33441 1.33441 1.33476 1.34077 1.34087 1.34083 1.34076	15.0 1.33690 1.33687 1.33681 1.33683 1.33624 1.33608 1.33591 1.33591 1.33591 1.33591 1.33591 1.33484 37.0 1.34104 1.34104 1.34105 1.34095	20.0 1.33789 1.33784 1.33786 1.33778 1.33789 1.33759 1.33759 1.33733 1.33717 1.3363 1.3363 1.33643 1.33643 1.33654 1.33578 38.0 1.34125 1.34125 1.34125 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.34121 1.3421	25.0  1.33867 1.33882 1.33874 1.33861 1.33861 1.33876 1.33773 1.33773 1.33773 1.33773 1.34774 1.34163 1.34163 1.34163 1.34163 1.34163 1.34163 1.34163 1.34163 1.34170 1.34089	1.33990 1.33979 1.33979 1.33971 1.33991 1.33993 1.33880 1.33884 1.33884 1.33886 1.33886 1.33781 1.33734 40.0 1.34182 1.34175 1.34182 1.34175 1.34183 1.34193 1	1.34006 1.33999 1.33990 1.33968 1.33950 1.33952 1.33905 1.33865 1.33865 1.33865 1.33865 1.33770 1.33776 1.33776 1.34106 1.34102 1.34104 1.34104 1.34104 1.34104 1.34104 1.34068 1.34068 1.34068	32.0 1.34025 1.34010 1.34010 1.34000 1.33973 1.33973 1.33973 1.33940 1.33940 1.33940 1.33847 1.33770 42.0 1.34222 1.3424 1.3424 1.34104 1.34104 1.34104 1.34104 1.3404 1.34064 1.34064 1.34064 1.34064	33.0  1.34045 1.34038 1.34029 1.34029 1.34029 1.33992 1.33974 1.33972 1.33971 1.33951 1.33951 1.33951 1.33958 1.33850 1.33858 1.33851 1.34241 1.34233 1.34223 1.34231 1.34231 1.34231 1.34231 1.34183 1.34181 1.34183 1.34181 1.34183 1.34181 1.34183 1.34181 1.34183 1.34181 1.34183 1.34181 1.34183

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Table A-3. (cont)

				( <u>i</u> )	•			[Cd]	λ = 643.8 nm
			\$4	LIMITY (	. <del>'</del>				
0.0	5.0	10.0	15.0	26.0	25.0	30.0	31.0	32.0	33.0
1.33242	1.33339	1.33437	1.33535	1.33433	1.33732	1.33629	1.33049	1.33069	1.33000
1.33240	1.33337	1.33434	1.33531	1.33628	1.33726	1.33023	1.33842	1.33041	1.33661
1.33234	1.33333	1.33429	1.33525	1.33621	1.33710	1.33614	1.33633	1.33052	1.33672
1.33231	1.33326	1.33422	1.33517	1.33612	1.33706	1.33804	1.33023	1.33042	1.33061
1.33224	1.33310	1.33413	1.33508	1.33602	1.33697	1.33792	1.33011	1.33029	1.33048
1.33215	1.33309	1.33402	1.33496	1.33590	1.33484	1.33776	1.33797	1.33016	1.33634
1.33205	1.33298	1.33391	1.33484	1.33577	1.33670	1.33763	1.33702	1.33000	1.33619
1.33193	1.33265	1.33377	1.33470	1.33542	1.33454	1.33747	1.33765	1.33784	1.33602
1.33179	1.33270	1.33362	1.33454	1.33545	1.33437	1.33729	1.33747	1.33766	1.33704
1.33143	1.33254	1.33345	1.33437	1.33520	1.33619	1.33710	1.33728	1.33744	1.33765
1.33146	1.33237	1.33327	1.33418	1.33509	1.33599	1.33490	1.33708	1.33726	1.33744
1.33127	1.33218	1.33308	1.33398	1.33489	1.33579	1.33669	1.33487	1.33705	1.33723
1.33100	1.33198	1.33288	1.33378	1.33467	1.33557	1.33447	1.33665	1.33643	1.33701
1.33087	1.33177	1.33266	1.33354	1.33445	1.33535	1.33625	1.33642	1.33660	1.33679
1.33045	1.33154	1.33244	1.33333	1.33422	1.33512	1.33601	1.33419	1.33437	1.33455
1.33042	1.33131	1.33220	1.33309	1.333%	1.33487	1.33577	1.33594	1.33612	1.33630
34.0	35.0	36.0	37.0	30.0	39.0	40.0	41.0	42.0	43.0
1.33908	1.33927	1.33947	1.33966	1.33586	1.34006	1.34025	1.34045	1.34065	1.34084
1.33900	1.33920	1.33939	1.33959	1.33978	1.33997	1.34017	1.34036	1.34054	1.34075
1.33891	1.33910	1.33929	1.3?949	1.33968	1.33967	1.34007	1.34026	1.34045	1.34064
1.33880	1.33849	1.33918	1.33937	1.33956	1.33975	1.33994	1.34013	1.34033	1.34052
1.33867	1.33886	1.33905	1.33924	1.33943	1.33962	1.33761	1.34000	1.34019	1-34038
1.33853	1.33872	1.33891	1.33909	1.33928	1.33947	1.33966	1.33965	1.34003	1.34022
1.33837	1.33856	1.33875	1.33893	1.33912	1.33931	1.33949	1.33968	1.33906	1-34005
1.33821	1.33839	1.33857	1.33876	1.33894	1.33913	1.33931	1.33950	1.33968	1.33986
1.33802	1.33821	1.33839	1.33857	1.33876	1.33894	1.33912	1.33930	1.33949	1.33967
1.33765	1.33801	1.33820	1.33838	1.33856	1.33874	1,33892	1.33911	1.33929	1.33947
1.33763	1.33761	1.33799	1.33817	1.33835	1.33853	1.33372	1.33890	1.33908	1.33926
1.33741	1.33759	1.33778	1.33796	1-33813	1.33032	1.33450	1.33868	1.3 3686	1.33904
1.33719	1.33737	1.33755	1.33773	1.33791	1.33809	1.33827	1.33845	1.33863	1.33381
1.33696	1.33714	1.33732	1.33750	1.33768	1.33786	1.33804	1.33822	1.33639	1.33656
1.33672	1.33690	1.33708	1.33726	1.33744	1.33762	1.33780	1.33798	1.33815	1.33833

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#### TABLE A-4

#### **Atmospheric Pressure**

This table holds for exactly the same values of salinity and temperature given for Tables A-1 through A-3. It contains the same data given in Table A-1 but in a different form and with some additional wavelengths. It gives the dependence of index of refraction of seawater (with respect to air) on temperature and wavelength at atmospheric pressure, for individual values of salinity.

The salinities have been chosen every 5% between 0 and 30%, and every 1% between 30 and 43% for oceanographic considerations. The temperatures are every 2°C between 0 and 30°C. The wavelengths have been chosen equispeced every 10 nm between 400 and 700 nm, giving an advantage over Table A-1.

The accuracy is "within"  $3 \times 10^{-5}$  in index in the interpolated wavelength range (404.7 to 643.8 nm) and possibly slightly less accurate outside this range.

Table A-4. INDEX OF REFRACTION OF SEAWATER
Selected Salinities — Atmospheric Pressure

										(PU	ME WATER)
					(=)	)				•	S = 0 %
TEMP				1	MYEL EM	ath (an) -					
oc.	i 400.0	410.0	420.0	430.0	440.0	450.0	440.0	470.0	480.0	490.0	1
0.0	1.34419	1.34324	1.34243	1.34164	1.34092	1.34024	1.33960	1.33900	1.33844	1.33791	
2.0	1.34417	1.34327	1.34242	1.34162	1.34091	1.34023	1.33959	1.33099	1.33043	1.33790	
4.0	1.34413	1.34323	1.34236	1.34159	1.34087	1.34020	1.33954	1.33095	1.33039	1.33767	
6.0	1.34408	1.34318	1.34232	1.34153	1.34062	1.34014	1.33950	1.33840	1.33434	1.33761	
F.0	1.34400	1.34310	1.34225	1.34146	1.34074	1.34007	1.33943	1.33883	1.33026	1.33773	
10.0	1.34390	1.34300	1.34215	1.34130	1.3:064	1.33497	1.33933	1.33073	1.33817	1.33764	
12.0	1.34379	1.34289	1.34204	1.34125	1.34053	1.3398>	1.33921	1.33061	1.3 3005	1.33753	
14.0	1.34366	1.34276	1.34191	1.34112	1.34040	1.33972	1.33908	1.33048	1.33793	1.33741	
16.0	1.34351	1.34261	:.34176	1.34097	1.34025	1.33957	1.33693	1.33633	1.33778	1.33726	
18.0	1.34334	1.34245	1.34160	1.34081	1.34009	1.33941	1.33077	1.33017	1.33762	1.33710	
20.0	1.34317	1.34227	1.34142	1.34063	1.33992	1.3392~	1.33040	1.33800	1.33745	1.33493	
22.0	1.34798	1.34208	1.34123	1.34044	1.33972	1.33905	1.33641	1.33782	1.33726	1.33474	
24.0	1.34277	1.34187	1.34102	1.34024	1.33952	1.33#8>	1.33821	1.33762	1.33704	1.33454	
26.0	1.34255	1.34166	1.34081	1.34002	1.33931	1.33864	1.33600	1.33740	1.33664	1.33632	
24.0	1.34232	1.34143	1.34058	1.33974	1.33900	1.33841	1.33777	1.33717	1.33662	1.33410	
30.0	1.34208	1.34119	1.34034	1.33955	1.33464	1.33816	1.33753	1.33693	1.33636	1.33586	
	500.0	510.0	520.0	530.0	540.0	550.0	500.0	570.0	500.0	590.0	
0.0	1.33741	1.33694	1.33649	1.33607	1.33567	1.33530	1.33494	1.33459	1.33424	1.33393	
2.0	1.33740	1.33693	1.33648	1.33404	1.33566	1.33529	1.33493	1.33457	1.33423	1.33392	
4.0	1.32737	1.33690	1.33645	1.33403	1.33563	1.33525	1.33489	1.33454	1.33420	1.33348	
6.0	1.33731	1.33684	1.33640	1.33597	1.33557	1.33520	1.33403	1.33448	1.33415	1.33303	
R.O	1.33723	1.33676	1.33632	1.33590	1.33550	1.33512	1.33475	1.33440	1.33404	1.33376	
10.0	1.33714	1.33667	1.33623	1.33581	1.33541	1.33503	1.33466	1.33431	1.33399	1.33347	
12.0	1.33703	1.33656	1.33612	1.33569	1.33529	1.33492	1.33455	1.33420	1.33348	1.33356	
14.0	1.33641	1.33644	1.33599	1.33557	1.33517	1.33479	1.33443	1.33408	1.33375	1.33343	
16.0	1.33676	1.33629	1.33585	1.33542	1.33502	1.33465	1.33430	1.33395	1.33361	1.33329	
18.0	1.33440	1.33613	1.37569	1.33526	1.33486	1.33450	1.33414	1.33379	1.33345	1.33314	
20.0	1.33643	1.33596	1.33551	1.33509	1.33469	1.33433	1.33397	1.33362	1.33328	1.33297	
22.0	1.33624	1.33577	1.33533	1.33490	1.33451	1.33414	1.33379	1.33344	1.33309	1.33278	
24.0	1.33604	1.33557	1.33513	1.33470	1.33431	1.33394	1.33359	1.33324	1.33284	1.33258	
26.0	1.33583	1.33534	1.33492	1.33449	1.33409	1.33373	1.33334	1.33303	1.33248	1.33237	
28.0	1.33560	1.33514	1.33469	1.33427	1.33367	1.33351	1.33314	1.33261	1.33244	1.33215	
30.0	1.33537	1.33490	1.33445	1.33403	1.33363	1.33??7	1.33292	1.33257	1.33223	1.33192	
	600.0	610.0	620.0	<b>630.0</b>	640.0	650.0	660.0	670.0	<b>680.</b> 0	690.0	700.0
0.0	1.33362	1.33333	1.33305	1.33278	1.33251	1.33225	1.33200	1.33176	1.33153	1.33130	1.33108
5 • 0	1.33361	1.33332	1.33304	1.33276	1.33250	1.33224	1.33199	1.33175	1.33152	1.33129	1.33100
4.0	1.33358	1.33328	1.33300	1.33273	1.33246	1.33220	1.33795	1.33171	1.33148	1.33124	1.33105
4.0	1.33352	1.33323	1.33294	1.33267	1.33241	1.33215	1.331+0	1.33166	1.33143	1.33121	1.33100
8.0	1.33345	1.33516	1.33288	1.33260	1.33234	1.33208	1.33183	1.33159	1.33136	1.33114	1.33093
10.0	1.33336	1.33307	1.33279	1.33251	1.33225	1.33199	1.33174	1.33150	1.33127	1.33105	1.33084
12.0	1.33325	1.33296	1.33248	1.33241	1.33214	1.33189	1.33144	1.33140	1.33117	1.33095	1.33074
14.0	1.33312	1.33283	1.33255	1.33229	1.33202	1.33177	1.33152	1.33126	1.33105	1.33003	1.33041
16.0	1.33299	1.33270	1.33242	1.33215	1.33189	1.33163	1.33138	1.33114	1.33091	1.33049	1.33047
18.0	1.33284	1.33255	1.3/227	1.33200	1.33173	1.33147	1.33122	1.33098	1.33076	1.33053	1.33032
20.0	1.33267	1.33238	1.33210	1.33183	1.33156	1.33130	1.33105	1.33061	1.33059	1.33037	1.33014
22.0	1.3324H	1.33220	1.33191	1.33164	1.33136	1.33112	1.330#7	1.33063	1.33040	1.33018	1.32997
24.0	1.33279	1.33200	1.33172	1.33144	1.33118	1.33092	1.33067	1.33044	1.33021	1.32999	1.32978
45.0	1.33208	1.33179	1.33151	1.33124	1.33097	1.33071	1.33047	1.33023	1.33000	1.32979	1.32958
28.0	1.33186	1.33157	1.33129	1.33102	1.33075	1.33049	1.33025	1.33001	1.32978	1.32957	1.32934
30.0	1.33162	1.33134	1.33106	1.33078	1.33052	1.33026	1.33001	1.32978	1.32955	1.32934	1.32913

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Table A-4. (cont)

A00.0   A10.0   A20.0   A30.0   A40.0   A50.0   A50.0   A60.0   A70.0   A80.0   A90.0						,	(b					
1,34522 1,34431 1,34345 1,34264 1,34194 1,34126 1,34061 1,34001 1,33944 1,33892 1,34519 1,34424 1,34343 1,34263 1,34191 1,34123 1,34059 1,33999 1,33942 1,33989 1,34515 1,34424 1,34338 1,34259 1,34181 1,34123 1,34059 1,33999 1,33942 1,33989 1,34515 1,34424 1,34338 1,34259 1,34181 1,34123 1,34059 1,33999 1,33942 1,33885 1,34508 1,34418 1,34322 1,34252 1,34180 1,34113 1,34048 1,33988 1,33932 1,33879 1,34508 1,34418 1,34323 1,34224 1,34127 1,34104 1,34048 1,33988 1,33932 1,33879 1,34489 1,34499 1,34513 1,34224 1,34127 1,34104 1,34040 1,33990 1,33923 1,33879 1,34481 1,34324 1,34281 1,34224 1,34120 1,34082 1,34018 1,33957 1,33901 1,33849 1,34448 1,34373 1,34288 1,34228 1,34120 1,34082 1,34018 1,33957 1,33901 1,33849 1,34448 1,34358 1,34273 1,34193 1,34121 1,34053 1,33988 1,33928 1,33931 1,33831 1,34241 1,34342 1,34238 1,3417 1,34104 1,34081 1,33954 1,33931 1,33821 1,34481 1,34324 1,34238 1,3417 1,34104 1,34081 1,33954 1,33912 1,33831 1,33831 1,33831 1,33834 1,33934	\$=59					GTH (nm)	yavelen	1				
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1.34519 1.34424 1.34338 1.34259 1.34107 1.34119 1.34059 1.33994 1.33942 1.33806 1.34508 1.34418 1.34322 1.34252 1.34100 1.34113 1.34048 1.33986 1.33932 1.33877 1.34449 1.34409 1.34513 1.34252 1.34100 1.34113 1.34048 1.33986 1.33923 1.33870 1.34449 1.34409 1.34513 1.34234 1.34122 1.34104 1.34040 1.33980 1.33923 1.33870 1.34449 1.34399 1.34513 1.34224 1.34122 1.34104 1.34031 1.33957 1.33901 1.33840 1.34477 1.34387 1.34581 1.34228 1.34281 1.34228 1.34120 1.34082 1.34018 1.33957 1.33901 1.33849 1.34448 1.34373 1.34288 1.34208 1.34134 1.34062 1.34018 1.33957 1.33901 1.33849 1.34448 1.34373 1.34288 1.34208 1.34134 1.34063 1.33976 1.33918 1.33928 1.33821 1.34431 1.34342 1.34254 1.34259 1.34159 1.34067 1.34018 1.33928 1.33928 1.33861 1.33928 1.34431 1.34324 1.34238 1.34159 1.34067 1.34018 1.33954 1.33891 1.33854 1.34398 1.34198 1.34118 1.34067 1.33999 1.33935 1.33875 1.33875 1.33804 1.3431 1.34243 1.34198 1.34118 1.34067 1.33999 1.33935 1.33875 1.33879 1.33767 1.34328 1.34281 1.34261 1.34176 1.34099 1.34025 1.33997 1.33915 1.33875 1.33819 1.33776 1.34281 1.34281 1.34128 1.34049 1.33977 1.33910 1.33846 1.33788 1.33778 1.33707 1.33621 1.34281 1.34281 1.34128 1.34049 1.33977 1.33910 1.33846 1.33788 1.33788 1.33788 1.33781 1.33783 1.33783 1.33783 1.33783 1.33783 1.33781 1.33783 1.33783 1.33783 1.33783 1.33783 1.33783 1.33784 1.33793 1.33879 1.33810 1.33754 1.33849 1.33889 1.33781 1.33784 1.33793 1.33869 1.33784 1.33793 1.33879 1.33893 1.33784 1.33793 1.33889 1.33781 1.33743 1.33789 1.33864 1.33789 1.33879 1.33810 1.33754 1.33793 1.33889 1.33781 1.33743 1.33693 1.33769 1.33864 1.33784 1.33793 1.33869 1.33784 1.33793 1.33879 1.33889 1.33781 1.33748 1.33789 1.33869 1.33591 1.33591 1.33784 1.33789 1.33789 1.33889 1.33789 1.33889 1.33789 1.33889 1.33789 1.33889 1.33889 1.33789 1.33889		1.33092	1.33944	1.34001	1.34061	1.34126	1.34194	1.34266	1.34345	1.34431	1.34522	
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1.34489					1.34048	1.34113	1.34180	1.34252	1.34332		1.34508	
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500.0         510.0         520.0         530.0         540.0         550.0         540.0         570.0         580.0         590.0           1.33841         1.33794         1.33749         1.33707         1.33666         1.33622         1.33557         1.33523         1.33749           1.33839         1.33778         1.33774         1.33704         1.33664         1.33627         1.33550         1.33551         1.33511         1.33489           1.33825         1.337781         1.33736         1.33640         1.33644         1.33571         1.33511         1.33485           1.33820         1.33773         1.33728         1.33684         1.33644         1.33571         1.33531         1.33471           1.33781         1.33763         1.33684         1.33644         1.33591         1.33534         1.33571         1.33471           1.33781         1.33763         1.33660         1.33634         1.33591         1.33524         1.33761         1.33464         1.33464         1.33564         1.33551         1.33461           1.33785         1.33763         1.33660         1.33624         1.33561         1.33524         1.33461         1.33461         1.33461         1.33461         1.33461         1.33461 </td <td></td>												
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1.33839 1.33781 1.33761 1.33760 1.33660 1.33651 1.33590 1.33551 1.33511 1.33489 1.33828 1.33781 1.33736 1.33660 1.33651 1.33579 1.33571 1.33685 1.33851 1.33781 1.33781 1.33785 1.33686 1.33651 1.33579 1.33585 1.33511 1.33479 1.33820 1.33731 1.33728 1.33686 1.33646 1.33646 1.33679 1.33536 1.33536 1.33536 1.33571 1.33747 1.33810 1.33763 1.33761 1.33766 1.33666 1.33664 1.33668 1.33598 1.33551 1.33562 1.33562 1.33661 1.33798 1.33751 1.33765 1.33660 1.33661 1.33662 1.33661 1.33598 1.33561 1.33516 1.33661 1.33662 1.33661 1.33662 1.33561 1.33562 1.33562 1.33661 1.33661 1.33662 1.33661 1.33662 1.33661 1.3366		590.0	580.0	570.0	540.0	550.0	540.0	530.0	520.0	510.0	500.0	
1.33839 1.33781 1.33761 1.33760 1.33660 1.33651 1.33590 1.33551 1.33511 1.33489 1.33828 1.33781 1.33736 1.33660 1.33651 1.33579 1.33571 1.33685 1.33851 1.33781 1.33781 1.33785 1.33686 1.33651 1.33579 1.33585 1.33511 1.33479 1.33820 1.33731 1.33728 1.33686 1.33646 1.33646 1.33679 1.33536 1.33536 1.33536 1.33571 1.33747 1.33810 1.33763 1.33761 1.33766 1.33666 1.33664 1.33668 1.33598 1.33551 1.33562 1.33562 1.33661 1.33798 1.33751 1.33765 1.33660 1.33661 1.33662 1.33661 1.33598 1.33561 1.33516 1.33661 1.33662 1.33661 1.33662 1.33561 1.33562 1.33562 1.33661 1.33661 1.33662 1.33661 1.33662 1.33661 1.3366		1.33491	1.33523	1.33557	1.33592	1-33629	1.33444	1-33707	1.33740	1-33794	1 - 33841	
1.33835 1.33788 1.33743 1.33700 1.33600 1.33622 1.33596 1.33551 1.33517 1.33485 1.33828 1.33781 1.33738 1.33738 1.33738 1.33686 1.33646 1.33646 1.33646 1.33571 1.33536 1.33571 1.33479 1.33810 1.33738 1.33738 1.33686 1.33646 1.33646 1.33646 1.33571 1.33536 1.33530 1.33471 1.33788 1.33751 1.33708 1.33751 1.33706 1.33664 1.33664 1.33666 1.33598 1.33561 1.33526 1.33469 1.33661 1.33781 1.33738 1.33693 1.33650 1.33610 1.33573 1.33591 1.33501 1.33468 1.33469 1.33770 1.33723 1.33678 1.33580 1.33579 1.33578 1.33571 1.33601 1.33468 1.33468 1.33770 1.33751 1.33678 1.33586 1.33597 1.33578 1.33591 1.33468 1.33468 1.33689 1.33662 1.33619 1.33579 1.33578 1.33501 1.33467 1.33468 1.33771 1.33670 1.33625 1.33582 1.33562 1.33562 1.33562 1.33562 1.33560 1.33471 1.33437 1.33407 1.33675 1.33675 1.33675 1.33688 1.33562 1.33582 1.33562 1.33561 1.33579 1.33470 1.33470 1.33490 1.33491 1.33675 1.33675 1.33675 1.33688 1.33581 1.33582 1.33582 1.33581 1.33481 1.33491 1.33491 1.33491 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33561 1.33561 1.33571 1.33468 1.33591 1.33369 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33675 1.33561 1.33511 1.33571 1.33464 1.33461 1.33371 1.33336 1.33369 1.33369 1.33369 1.33562 1.33561 1.33561 1.33561 1.33561 1.33571 1.33368 1.33369 1.3336												
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1.33785 1.33788 1.33693 1.33650 1.33610 1.33513 1.33537 1.33501 1.33468 1.33436 1.33770 1.33773 1.33628 1.33619 1.33619 1.33655 1.33659 1.33558 1.33522 1.33407 1.33453 1.33421 1.33734 1.33628 1.33619 1.33619 1.33562 1.33558 1.33500 1.33501 1.33471 1.33437 1.33405 1.33736 1.33610 1.33625 1.33602 1.33562 1.33562 1.33562 1.33688 1.33453 1.33401 1.33401 1.33401 1.33401 1.33609 1.33607 1.33605 1.33625 1.33628 1.33562 1.33562 1.33562 1.33608 1.33401 1.33401 1.33401 1.33609 1.3361		1.33449	1.33482	1.33514	1.33549	1.33586						
1.33754 1.33707 1.33662 1.33619 1.33577 1.33562 1.33506 1.33471 1.33437 1.33405 1.33736 1.33689 1.33689 1.33680 1.33680 1.33680 1.33680 1.33680 1.33680 1.33680 1.33680 1.33680 1.33680 1.33670 1.33670 1.33605 1.33562 1.33562 1.33562 1.33670 1.33470 1.33434 1.33400 1.33369 1.33675 1.33675 1.33605 1.33562 1.33562 1.33562 1.33562 1.33675 1.33675 1.33605 1.33561 1.33561 1.33606 1.33406 1.33415 1.33360 1.33369 1.33675 1.33605 1.33561 1.33561 1.33561 1.33605 1.3360		1.33436	1.33468	1.33501	1.33537	1.33573	1.33610	1.33450				
1.33736 1.33689 1.33644 1.33602 1.33562 1.33555 1.33468 1.33453 1.33420 1.33388 1.33717 1.33570 1.33675 1.33585 1.33582 1.33543 1.33560 1.33500 1.33434 1.33400 1.33369 1.33675 1.33628 1.33563 1.33561 1.33561 1.33561 1.33561 1.33562 1.33562 1.33562 1.33562 1.33563 1.33485 1.33464 1.33462 1.33462 1.33363 1.33360 1.33367 1.33652 1.33562 1.33561 1.33518 1.33578 1.33464 1.33468 1.33468 1.33371 1.33336 1.33305 1.33628 1.33582 1.33537 1.33494 1.33454 1.33418 1.33363 1.33348 1.33382							1.33595	1.336.5	1.33678	1.33723	1.33770	
1.33717 1.33670 1.33625 1.33582 1.33582 1.33590 1.33470 1.33434 1.33400 1.33369 1.33697 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.33650 1.3366		1.33405					1.33579	1.33619	1.33662	1.33707	1.33754	
1.33697 1.33650 1.33665 1.33562 1.33522 1.33525 1.33455 1.33455 1.33415 1.33340 1.33349 1.33575 1.33628 1.33581 1.33511 1.33511 1.33561 1.33464 1.33428 1.33393 1.33359 1.33327 1.33657 1.33605 1.33561 1.33518 1.33478 1.33441 1.33406 1.33371 1.33336 1.33305 1.33628 1.33582 1.33537 1.33494 1.33454 1.33418 1.33363 1.33348 1.33313 1.33282												
1.33675 1.33628 1.33583 1.32541 1.33501 1.33464 1.33428 1.33393 1.33359 1.33327 1.33652 1.33655 1.33561 1.33518 1.33478 1.33441 1.33406 1.33371 1.33336 1.33305 1.33628 1.33582 1.33537 1.33494 1.33454 1.33418 1.33363 1.32348 1.33313 1.33282												
1.33657 1.33605 1.33561 1.33518 1.33478 1.33441 1.33406 1.33371 1.33336 1.33305 1.33628 1.33582 1.33537 1.33494 1.33454 1.33418 1.33383 1.33348 1.33313 1.33282												
1.33628 1.33582 1.33537 1.33494 1.33454 1.33418 1.33363 1.33348 1.33313 1.33282												
•												
600.0 610.0 620.0 630.0 640.0 650.0 660.0 670.0 680.0 690.0		1.33282	1.33313	1.32348	1.33353	1.33418	1.33454	1.33474	1.33537	1.33582	1.33628	
	700.0	490.0	680.0	670.0	660.0	450.0	640.0	630.0	620.7	610.0	600.0	
	.33206											
	.33205											
	.33201											
	1.33195 1.33187											
	.33178											
	.33146											
	.33153											
	.33139											
	.33123											
	- 33105											
	.33067											
	. 33067											
	-33044											
	.33024	1.33045	1.33067		1.33114	1.33139	1.33164	1.33191	1.33218	1.33247	1.33275	
1.33252 1.33223 1.33195 1.33167 1.33141 1.33115 1.33090 1.33067 1.33044 1.33022 1	.33001	1.33022	1.3 3044	1.33067	1.33090	1.33115	1.33141	1.33167	1.37195	1.33223	1.33252	

Table A-4. (cont)

(c)										
				WAWST SW	OTH ()					S = 10 %
400.0	410.0	420.0	430.0	WAVELEN 440.0	450.0	460.0	470.0	480.0	490.0	
1.34625	1.34534	1.34448	1.34368	1.34295	1.34227	1.34162	1.34102	1.34045	1.33992	
1.34621	1.34531	1.34444	1.34365	1.34242	1.34224	1.34159	1.34099	1.34042	1.33969	
1.34616	1.34525	1.34439	1.34359	1.34287	1.34219	1.34154	1.34093	1.34037	1.33964	
1.34606	1.34517	1.34432	1.34352	1.34279	1.34211	1.34147	1.34084	1.34029	1-33977	
1.34599	1.34508	1.34422	1.34343	1.34270	1.34202	1.34138	1.34077	1.34020	1.33947	
1.34588	1.34498	1.34412	1.34332	1.34260	1.34192	1.34127	1.34066	1.34010	1.33957	
1.34574	1.34485	1.34399	1.34319	1.34247	1.34178	1.34114	1.34053	1.33997	1.33944	
1.34562	1.34471	1.34385	1.34290	1.34217	1.34148	1.34083	1.34023	1.33967	1.33915	
1.34546			1.34273	1.34200	1.34131	1.34044	1.34006	1.33950	1.33898	
1.34529	1.34438 1.34420	1.34352	1.34254	1.34162	1.34113	1.34048	1.33988	1.33932	1.33000	
1.34490	1.34400	1.34314	1.34235	1.34162	1.34094	1.34029	1.33969	1.33912	1.33860	
1.34469	1.34379	1.34293	1.34213	1.34141	1.34073	1.34008	1.33948	1.33092	1.33839	
1.34447	1.34356	1.34271	1.34191	1.34119	1.34051	1.33586	1.33926	1.33670	1.33817	
1.34423		1.34247	1.34167	1.34095	1.34027	1.33963	1.33903	1.33844	1.33794	
1.34398	1.34308	1.34222	1.3+143	1.34071	1.34003	1.33939	1.33078	1.33822	1.33770	
1. 5-376	1.34300	1. 7.22	1037173	1.340/1	1.3400	1033737	11334.4	103,022	1.33770	
500.0	510.0	520.0	530.0	540.0	550.0	540.0	570.0	580.0	590.0	
1.33542	1.33894	1.33849	1.33806	1.33766	1.33728	1.33691	1.33656	1.33622	1.33589	
1.33939	1.33891	1.33846	1.33003	1.33763	1.33725	1.33488	1.33453	1.33619	1.33587	
1.33933	1.23886	1.33841	1.33798	1.33757	1.33720	1.33683	1.33648	1.33614	1.33582	
1.33926	1.33878	1.33834	1.33791	1.33750	1.33712	1.33675	1.33440	1.33407	1.33575	
1.33917	1.33869	1.33824	1.33782	1.33742	1.33703	1.33466	1.33631	1.3 3599	1.33566	
1.33906	1.33858	1.33814	1.33771	1.33731	1.33693	1.33655	1.33420	1.33588	1.33556	
1.33894	1.33846	1.33801	1.33759	1.33718	1.33680	1.33643	1.33606	1.33574	1.33543	
1.33880	1.33832	1.33787	1.33744	1.33704	1.33666	1.33630	1.33595	1-33561	1.33529	
1.33864	1.33017	1.33772	1.33729	1.33670	1.33651	1.33415	1.33580	1.33544	1.33514	
1.33848	1.33800	1.33755	1.33712	1.33672	1.33635	1.33599	1.33543	1-33529	1.33497	
1.35829	1.33782	1.33737	1.33694	1.33654	1.33417	1.33581	1.33545	1.33511	1.33479	
1.33809	1.33762	1.33717	1.33674	1.33634	1.33597	1.33561	1.33526	1.33491	1.33440	
1.33789	1.33742	1.33697	1.33454	1.33414	1.33577	1.33541	1.33504	1.33471	1.33439	
1.33767		1.33675	1.33632	1.33592	1.33555	1.33519	1.33484	1.33449	1.33418	
1.33744	1.33697	1.33452	1.33609	1.33569	1.33532	1.33444	1.33461	1.33427	2.33395	
1.33720	1.33473	1.33628	1.33585	1.33545	1.33508	1.33473	1.33438	1.33403	1.33372	
600.0	410.0	620.0	630.0	640.0	650.0	440.0	670.0	480.0	690.0	700.0
1.33558	1.33529	1.33501	1.33474	1.33447	1.33421	1.33396	1.33372	1.33348	1.33325	1.33303
1.33556	1.33524	1.33498	1.33471	1.33444	1.3341#	1.33393	1.33369	1.33345	1.33323	1.33301
:.33551		1.33493	1.33466	1.33439	1.33413	1.33388	1.33343	1.33340	1.33318	1.33297
1.33544	1.33514	1.33486	1.33459	1.33432	1.33406	1.33380	1.3335÷	1.33333	1.33311	1.33290
1.33536		1.35477	1.33450	1.33423	1.33397	1.33372	1.33346	1.33325	1.33302	1.33261
1.33525		1.33467	1.33439	1.33413	1.33386	1.33341	1.33337	1.33314	1.33292	1.33271
1.33512		1.33455	1.33427	1.33401	1.33375	1.33350	1.33325	1.33302	1.33280	1.33259
1.33498	1.33469	1.33441	1.33414	1.33387	1.33361	1.33334	1.33312	1-33289	1.33267	1.33245
1.33483		1.33426	1.33398	1.33372	1.33346	1.33321	1.33297	1.33274	1.33251	1.33230
1.33467	1.33437	1.33409	1.33382	1.33355	1.33329	1.33304	1.33280	1-33257	1.33235	1.33213
1.33449		1.33391	1.33344	1.33337	1.33311	1.33286	1.33262	1.33239	1.33217	1.33195
1.33430		1.33372	1.33345	1.3331#	1.33292		1.33243		1.33198	1.33176
1.33409		1.33352	1.33325	1.3329	1.33272		1.33223	1.33200	1.33178	1-33156
1.33388		1.33330	1.33303	1.33276	1.33250	1.33225	1.33202	1.33179	1.33157	1.33136
1.33365		1.33308	1.33280	1.33254	1.33228		1.33179	1.33156	1.33134	1.33113
1.33342	1.33312	1.33284	1.33257	1.33230	1.33204	1.33179	1.33156	1.33133	1.33111	1.33090

#### Toble A-4 (cont)

					(d	)					S = 15%
_					<b>VAVELEN</b>	GTH (mm)					
١,	00.0	410.0	420.0	430.0	440.0	450.0	440.0	470.0	480.0	49049	•
1.	34728	1.34637	1.34551	1.34470	1.34397	1.34328	1.34263	1.34202	1.34145	1.34042	
	34723	1.34632	1.34544	1.34466	1.34393	1.34324	1.34259	1.34196	1.341+1	1.34088	
1.	34717	1.34626	1.34540	1.34440	1.34367	1.34318	1.34252	1.34192	1,54135	1.34092	
1.	34709	1.34618	1.34531	1.34451	1.34376	1.34310	1.34245	1.34184	1.34127	1.34074	
ı.	34499	1.34400	1.34521	1.34441	1.34369	1.34300	1.34235	1.34175	1.34116	1.34064	
ı.	34688	1.34594	1.34510	1.34430	1.34357	1.34289	1.34224	1.34163	1.34106	1.34053	
٠.	34475	1.34583	1.34497	1.34417	1.34344	1.34275	1.34210	1.34149	1.34093	1.34040	
	34660	1.34549	1.34482	1.34402	1.34329	1.34240	1.34195	1.34134	1.34078	1.34025	
	34643	1.34552	1.34444	1.34344	1.34313	1.34243	1.34178	1.34118	1.34062	1.34009	
	3462L	1.34535	1.34449	1.34369	1.34295	1.34226	1.34161	1.34100	1.34045	1.33992	
	34607	1.34516	1.34430	1.34350	1.34277	1.34207	1.34142	1.34042	1.34026	1.33973	
	34587	1.34496	1.34410	1.34330	1.34257	1.34188	1.34123	1.34062	1.34006	1.33953	
	34565	1.34474	1.34388	1.3430#	1.34235	1.34167	1.34102	1.34041	1.33985	1.33932	
ı.	34543	1.34452	1.34366	1.34286	1.34213	1.34144	1.34080	1.34019	1.33962	1.33910	
1.	34519	1.34428	1.34342	1.34262	1.34189	1.34121	1.34056	1.33996	1.33939	1.33687	
1.	34494	1.34403	1.34317	1.34237	1.34164	1.34096	1.34032	1.33971	1.33915	1.33862	
5	00.0	510.0	520.0	530.0	540.0	550.0	540.0	570.0	580.0	590.C	
1.	34042	1.33994	1.33949	1.33906	1.33865	1.33827	1.33790	1.33755	1.33720	1.33688	
1.	34038	1.33990	1.33945	1.33901	1.33861	1.33873	1.33786	1.33751	1.33717	1.33684	
ı.	34032	1.33984	1.33939	1.33095	1.33855	1.33817	1.33780	1.33747	1.33711	1.33679	
1.	34023	1.33976	1.33930	1.33887	1.33847	1.33804	1.33772	1.33736	1.33704	1-33471	
١.	34013	1.33965	1.33921	1.33878	1.33038	1.33799	1.33762	1.33727	1.33694	1.33661	
1.	34002	1.33954	1.33909	1.33867	1.33026	1.33788	1.33750	1.33715	1.33683	1.33.50	
ı.	33989	1.33941	1.33896	1.33853	1.33013	1.33774	1.33737	1.33702	1.33669	1.33637	
	33975	1.33927	1.33881	1.33836	1.33790	1.33760	1.33723	1.33688	1.33654	1.33422	
1.	33958	1.33910	1.33865	1.33822	1.33782	1.33744	1,33708	1.33672	1.33635	1.33606	
	33941	1.33893	1.33848	1.33805	1.33765	1.33727	1.33690	1.33655	1.33621	1.33589	
1.	33922	1.33675	1.33829	1.33787	1.33747	1.33709	1.33072	1.33636	1.33603	1.33570	
	33902	1.33855	1.33810	1.33767	1.33727	1.3366	1.33652	1.33616	1.335#3	1.33551	
1.	33882	1.33834	1.33789	1.33746	1.33706	1.33668	1,33632	1.33596	1.33562	1.33530	
1.	33860	1.33412	1.33767	1.33724	1.33684	1.33646	1.33610	1.33574	1.33540	1.33508	
	33036	1.33789	1.33744	1.33701	1.33661	1.33623	1.33587	1.33551	1.33517	1.33485	
	33812	1.33765	1.33720	1.33477	1.33637	1.33599	1.33563	1.33527	1.33494	1.33462	
4	00.0	610.0	620.0	630.0	640.0	<b>650.0</b>	660.0	670.0	680.0	690.0	700.0
	33657	1.33628	1.33599	1.33572	1.33545	1.33519	1.33494	1.33470	1.33446	1.33423	1.33401
	33453	1.33624	1.33595	1.33568	1.33541	1.33515	1.33490	1.33466	1.33442	1.33420	1.33394
	33648	1.33618	1.33589	1.33542	1.33535	1.33509	1.33484	1.43460	1.33436	1.33414	1.23393
	33640	1.33610	1.33582	1.33554	1.33527	1.33501	1.33476	1.33452	1.33429	1.33404	1.33305
	33431	1.33601	1.33572	1.33545	1.33519	1.33492	1.33466	1.33442	1.3.419	1.33397	1.33376
	33619	1.33590	1.33561	1.33533	1.33504	1.33480	1.33455	1.33431	1.33408	1.33386	1.33344
	33404	1.33576	1.33548	1.33520	1.33494	1.33468	1.33443	1.33418	1.33395	1.33373	1.33352
	33591	1.33541	1.33533	1.33506	1.33480	1.37554	1.33429	1.33404	1.33381	1.33359	1.33337
	33575	1.33546	1.33518	1.33490	1.33464	1.33438	1.33413	1.33308	1.33345	1.33342	1.33321
	33558	1.33529	1.33500	1.33473	1.33447	1.33420	1.33395	1.33371	1.33348	1-33325	1.33303
	33539	1.33510	1-33482	1.33455	1.33428	1.33402	1.33377	1.33352	1.33329	1.33367	1.53285
	33520	1.33490	1.33462	1.33435	1.33408	1.33362	1.33357	1.33333	1.33310	1.33287	1.33266
	33499	1.33470	1.33442	1.33414	1.33368	1.33302	1.33337	1.33313	1.33289	1-33267	1.33246
	33478	1.33448	1.33420	1.33393	1.33366	1.33340	1.33315	1.33291	1.33268	1.33246	1.33224
		1.33426	1.33397	1.33370	1.33343	1.33317	1.33292	.1.33268	1.33245	1.33223	1.33202
	.33455 .33431					1.33293	1.33268		1.33221		1.33178

CONCERNITION OF THE PROPERTY O

The substitution of the contraction of the contract

Table A-4. (cont)

	(e) s										
MP					WAVELER	IOTH (nm)					
,C	400.0	410.0	420.0	430.0	440.0	450.0	440.0	470.0	480.0	490.0	•
.0	1.34832	1.34740	1.34653	1.34572	1.34499	1.34430	1.34364	1.34303	1.34246	1.34193	
.0	1.34826	1.34/34	1.34647	1.34567	1.34494	1.34425	1.34359	1.34298	1.34241	1.34188	
.0	1.34818	1.34727	1.34640	1.34560	1.34486	1.54418	1.34352	1.34291	1.34234	1.34181	
•0	1.34809	1.34718	1.34631	1.34550	1.34477	1.34409	1.34343	1.34282	1.34225	1.34172	
•0	1.34798	1.34707	1.34620	1.34540	1.34467	1.34398	1.34333	1.34272	1.34215	1.34161	
.0	1.34787	1.34695	1.34608	1.34528	1.34455	1-34386	1.34321	1.34260	1.34203	1.34149	
.0 .0	1.34773	1.34681	1.34595	1.34514	1.34441	1.34371	1.34306	1.34245	1.34187	1.34135	
	1.34758	1.34666	1.34579	1.34499	1.34425	1.34356	1.34291	1.34230	1.34173	1.34120	
	1.34741	1.34649	1.34563	1.34482	1.34408	1.34339	1.34273	1.34213	1.34157	1.34104	
	1.34723	1.34632	1.34545	1.34465	1.34391	1.34321	1.34256	1.34195	1.34139	1.34006	
	1.34704	1.34592	1.34526	1.34446	1.34372	1.34362	1.34237	1.34176	1.34120	1.34066	
	1.34461	1.34570		1.34425	1.34351	1.34282	1.34217	1.34156	1.34099	1.34046	
	1.34638	1.34547	1.34484	1.34403	1.34330	1.34261	1.34195	1.34134	1.34078	1.34025	
	1.34614	1.34523	1.34436	1.34356	1.34283	1.34214	1.34149	1.34112	1.34055	1.34002	
	1.34589	1.34498	1.34411	1.34331	1.34258	1.34189	1.34124	1.34044	1.34031	1.33979	
	,	2434470	******		******	1034107	1.37124	11.37047	1434007	1033777	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
	1-34142	1.34094	1.34048	1.34005	1.33965	1.33926	1.33889	1.33853	1.33619	1.33786	
	1.34137	1.34089	1.34043	1.34000	1.33959	1.33921	1.33884	1.33848	1.33415	1.33782	
	1.34130	1.34082	1.34036	1.33993	1.33952	1.33914	1.33577	1.33842	1.33808	1.33775	
	1-34121	1.34073	1.34027	1.33984	1.33%3	1.33905	1.33868	1.33833	1.33000	1.33767	
	1.34110	1.34062	1.34017	1.33974	1.33934	1.33895	1.33857	1.33822	1.33789	1.33757	
	1.34098	1.34050	1.34005	1.33962	1.33922	1.33883	1.33845	1.33809	1.33777	1.33744	
	1.34084	1.34036	1.33991	1.33948	1.33907	1.33869	1.33831	1.337%	1.33763	1.33730	
	1.34052	1.34004	1.33958	1.33932	1.33891	1.33854	1.33817	1.33741	1.33747	1.33715	
	1.34035	1.33986	1.33941	1.33598	1.33857	1.33820	1.33801	1.33765	1.33731	1.33498	
	1.34015	1.33967	1.33922	1.33879	1.33839	1.33801	1.33764	1.33728	1.37694	1.33662	
	1.33995	1.33947	1.33902	1.33859	1.33819	1.33780	1.33743	1.33700	1.33674	1.33641	
	1.33974	1.33926	1.33861	1.33838	1.33797	1.33759	1.33723	1.33687	1-33653	1.33620	
	1.33952	1.33704	1.33859	1.33816	1.33775	1.33737	1.33700	1.33664	1.33631	1.33590	
	1.33928	1.33881	1.33836	1.33792	1.33752	1.33714	1.33677	1.33642	1.33408	1.33575	
	1.33904	1.33856	1.33611	1.33766	1.33728	1.33690	1.33653	1.33618	1.33584	1.33552	
	600.0	610.0	620.0	630.0	640.0	650.0	660.0	670.0	680.0	690.0	700.0
	1.33755	1.33725	1.33697	1.33670	1.33643	1.33617	1.33592	1.33567	1.33543	1.33520	1.33498
	1.33751	1.33721	1.33693	1.33665	1.33638	1.33612	1.33587	1.33562	1.33539	1.33514	1.33494
	1.33744	1.33714	1.33686	1.33658	1.33631	1.33605	1.33580	1.33556	1.33532	1.33510	1.33488
	1.33736	1.33706	1.33677	1.33650	1.33623	1.33596	1.33571	1.33547	1.33524	1.33501	1.33440
	1.33726	1.33696	1.33667	1.33639	1.33612	1.33586	1.33561	1.33537	1.33513	1.33491	1.33470
	1.33714	1.33684	1.33655	1.33627	1.33600	1.33574	1.33549	1.33525	1.33502	1.33479	1.33458
	1.33700	1.33670	1.33641	1-33614	1.33587	1.33561	1.33535	1.33511	1.33488	1.33456	1.33444
	1.33684	1.33654	1.33624	1.33599	1.33572	1.33544	1.33521	1.33497	1.33473	1.33451	1.33429
	1.33467	1.33638	1.33609	1.33582	1.33555	1.33529	1.33504	1.33480	1.33456	1.33434	1.33412
	1.33650	1.33620	1.33592	1.33564	1.33538	1.33512	1.33486	1.33462	1.33438	1.33416	1.33394
			1.33573	1.33545	1.33519	1.33493	1.33467	1.33443	1.33419	1.33397	1.33375
	1.33410	1.33561	1.33553	1.33525	1.33499	1.33473	1.33447	1.33423	1.33399	1.33377	1.33355
	1.33567	1.33538	1.33510	1.33482	1.33455	1.33429	1.33424	1.33402	1.33379	1.33356	1.33335 1.33313
	1.33545	1.33515	1.33487	1.33459	1.33432	1.33406	1.33381	1.33357	1.33334	1.33312	1.33290
	1.33521	1.33491	1.33463	1.33435	1.33408	1.33382	1.33357	1.33333	1.33310	1.33288	1.33266
			, , , , , , ,						***************************************		

A STANTING TO THE WASTERN TO THE WAS

(1)

											S = 25 %
THMP					SALDUT	Y (9/m) —					
oC.	400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	•
0.0	1.34935	1.34843	1.34756	1.34675	1.34401	1.34531	1.34465	1.34404	1.34346	1.34273	
2.0	1.34928	1.34836	1.34749	1.34668	1.34594	1.34525	1.34459	1.34390	1-34341	1.34217	
4.0	1.34919	1.34827	1.34741	1.34660	1.34504	1.34517	1.34452	1.34390	1.34333	1.34270	
4.0	1.34909	1.34818	1.34731	1.34450	1.34577	1.34507	1.34442	1.34380	1.34323	1.34270	
8.0	1.34898	1.34804	1.34719	1.34439	1.34565	1.34496	1.34431	1.34349	1.34312	1.34258	
10.0	1.34886	1.34794	1.34707	1.34626	1.34552	1.34403	1.34418	1.34354	1.34299	1.34245	
12.0	1.34872	1.34780	1.34592	1.34611	1.34537	1.34468	1.34403	1.34341	1.34204	1.34231	
14.0	1.34056	1.34764	1.34677	1.34575	1.34521	1.34452	1.34384	1.34325	1.34269	1.34215	
16-0	1.34839	1.34747	1. 34459	1.34578	1.34504	1.34434	1.34369	1.34308	1.34251	1.34198	
18-0	1.34820	1.34728	1.34441	1.34540	1.344.86	1.34416	1.34350	1.34249	1.34233	1.34179	
20.0	1.34800	1.34709	1.34622	1.34541	1.34467	1.34397	1.34331	1.34270	1.34213	1.34140	
22.0	1.34779	1.34688	1.34601	1.34520	1.34444	1.34376	1.34311	1.34249	1.34192	1.34139	
24.0	1.34758	1.34444	1.34579	1.34498	1.34424	1.34355	1.34289	1.34228	1.34171	1.34117	
24.0	1.34734	1.34643	1.34555	1.34475	1.34401	1.34332	1.34266	1.34205	1.34148	1.34095	
28.0	1.34710	1.34618	1.34531	1.34450	1.34377	1.34308	1.34243	1.34181	1.34124	1.34071	
30.0	1.34684	1.34593	1.34506	1.34425	1.34352	1.34283	1.34218	1.34154	1.34099	1.34046	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.34242	1.34194	1.34148	1.34105	1.34064	1.34025	1.33967	1.33951	1.33918	1.23885	
2.0	1.34236	1.34188	1.34142	1.34098	1.34057	1.34019	1.33962	1.33947	1.33912	1.33680	
4.0	1.34228	1.34180	1.34134	1.34090	1.34049	1.34011	1.33975	1.33940	1.33905	1.33872	
6.0	1.34210	1.34170	1.34124	1.34081	1.34040	1.34001	1.33964	1.33929	1.33094	1.33063	
8.0	1.34207	1-34156	1.34113	1.34070	1.34029	1.33990	1.33953	1.33917	1.33065	1.33052	
10.0	1.34194	1.34145	1.34100	1.34058	1.34017	1.33978	1.33940	1.33904	1.33672	1.33639	
12.0	1.34179	1.34131	1.34005	1.34043	1.34002	1.33963	1.33925	1.33090	1.33457	1.33824	
14.0	1.34164	1.34115	1.34049	1.34026	1.33985	1.33947	1.33910	1.33874	1.33041	1.33800	
16.0	1.34146	1.34098	1.34052	1.34008	1.33%8	1.33930	1.33894	1.33858	1.33423	1.33790	
18.0	1.3412F	1.34079	1.34034	1.33990	1.33950	1.33912	1.33875	1.33839	1.33405	1.33772	
20.0	1.34108	1.34040	1.34015	1.33972	1.33931	1.33893	1.33855	1.33617	1.33766	1.33753	
22.0	1.34088	1.34040	1.33994	1.33951	1.33911	1.33872	1.33835	1.33799	1.33765	1.33732	
24.0	1.34064	1.34018	1.33973	1.33930	1.33009	1.33051	1.33814	1.33776	1.33743	1.33711	
26.0	1.34044	1.33996	1.33951	1.33907	1.33846	1.33628	1.33791	1.33755	1.33721	1.33409	
28.0	1.34020	1.33972	1.33927	1.33084	1.33643	1.33005	1.33748	1.33733	1.33696	1-35445	
30-0	1.33995	1.33948	1.33902	1.33#59	1.33819	1.33781	1.33744	1.33706	1.35674	1.33642	
	480.0	610.0	620.0	630.0	640.0	650,0	660.0	470.0	<b>68).</b> 0	<b>♦</b> ₹0.0	700.0
0.0	1.33854	1.33624	1.33796	1.33768	1.33742	1.33715	1.33690	1.33645	1.33641	1.33618	1.33596
2.0	1.33048	1.33618	1.33790	1.33762	1.33/34	1.33709	1.33484	1.33657	1.33636	1.33613	1.33591
4.0	1.33041	1.33611	:.33782	1.33755	1.33728	1.33701	1.33676	1.33452	1.33620	1.33404	1.33584
4.0	1.33832	1.33802	1.33773	1.33745	1.33710	1.33692	1.33667	1.33442	1.33619	1.33394	1.33575
8.0	1.33621	1.33791	1.33762	1.33734	1.33707	1.33481	1.33655	1.33631	1.33609	1.33585	1.33544
10.0	1.33606	1.33778	1.33749	1.33721	1.33694	1.33668	1.33443	1.33618	1.33595	1.33573	1.33551
12.0	1.33793	1.33763	1.33735	1.33707	1.33680	1.33654	1.33628	1.33604	1.33561	1.33558	1.33537
14.0	1.33774	1.33747	1.33710	1.33691	1,33664	1.33638	1.33613	1.33589	1 .33565	1.33543	1.33521
16.0	1.33760	1.33730	1.33702	1.33474	1.33447	1.33621	1.33596	1.33571	1-33547	1.33525	1.33503
16.0	1.33741	1.33711	1.33683	1.33656	1.33629	1.33603	1.33577	1.33553	1.33529	1.33504	1.33484
20.0	1.33721	1.33492	1.33663	1.33636	1.33609	1.33503	3.33550	1.33533	1.33509	1.33404	1.33464
22.0	1.33701	1.33671	1.33643	1.33615	1.33509	1.33563	1.33537	1.33513	1.33489	1.33466	1.33444
24.0 26.0	1.33400	1.33450	1.33622	1.33594	1.33567	1.33541	1.33514	1.33492	1.33466	1.33445	1.33424
28.0	1.33635	1.33405	1.33599	1.33549	1.33545	1.33519	1.33494	1.33469	1.33446	1.33424	1.33402
30.0			1.33552	1.33524	1.33498	1.33495	1.33470	1.33446	1.33423	1.33401	1.33379
,,,,,	1033410			. • > > > > C =		1033411		1.33422	1.33399	1.33376	1.33355

AND SECTION OF THE PROPERTY OF

### Table A-4. (cont)

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					19	•					8=30%
OC TEMP	L	<del></del>			AVAELEN						—
~	400.0	410.0	420.0	430.0	440.0	450.0	440.0	470.0	480.0	490.0	-
0.0	1.35038	1.34946	1.34858	1.34777	1.34702	1.3/632	1.34566	1.34504	1.34447	1.34393	
2.0	1.35030	1.34736	1.34850	1.34769	1.34695	1.34625	1.34559	1.34498	1.34440	1.34307	
4.0	1.35020	1.34928	1.34841	1.34760	1.34666	1.34617	1.34551	1.34489	1.34432	1.34378	
4.0	1.35009	1.34410	1.34830	1.34749	1.34676	1.34606	1.34540	1.34479	1.34421	1.34347	
8.0	1.34998	1.34906	1.34618	1.34737	1.34664	1.34594	1.34528	1.34467	1.34409	1.34355	
10.0	1.34905	1-34893	1.34805	1.34724	1.34650	1.34580	1.34515	1.34453	1.34395	1.34341	
12.0	1.34970	1.34878	1.34790	1.34700	1.34634	1.34565	1.34499	1.24437	1.34360	1.34326	
14.0	1.34954	1.34861	1.34774	1.34692	1.34618	1.34546	1.34482	1.34421	1.34364	1.34310	
14.0	1.34934	1.34544	1.34756	1.34675	1.34600	1.34530	1-34464	1.34402	1.34346	1.34292	
18.0	1.34917	1.34025	1.34738	1.34656	1.34501	1.34511	1.34445	1.34384	1-34327	1.34274	
20.0	1.34897	1.34805	1.34718	1.34637	1.34562	1.34491	1.34425	1.34344	1.34307	1.34254	
27.0	1.34876	1.34784	1.34697	1.34615	1.34541	1.34448	1.34404	1.34343	1-34204	1.34232	
24.0 26.0	1.34854	1.34734	1.34650	1.34569	1.34495	1.34425	1.34359	1.34298	1.34244	1.34187	
28.0	1.34805	1.34713	1.34626	1.34544	1.34471	1.34401	1.34336	1.34274	1.34216	1.34163	
30.0	1.34780	1.34687	2.34600	1.34519	1.34445	1.34376	1.34311	1.34249	1-34192	1.34138	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.34342	1.34293	1.34248	1.34204	1.34163	1.34125	1.34087	1.34051	1.34014	1.33983	
7.0	1.34335	1.34287	1.34241	1.34197	1.34155	1.3411#	1.34081	1.34045	1.34010	1.33977	
4.0	1.34327	1.34278	1.34232	1.34187	1.34146	1.34109	1.34073	1.34037	1.34002	1.33969	
6.0	1.34316	1.34267	1.34221	1.34178	1.34137	1.34096	1.34061	1.34025	1.33992	1.33959	
A.0	1.34303	1.34255	1.34209	1.34166	1.34125	1.34086	1.34048	1.34012	1.3 3980	1.33947	
10.0	1.34290	1.34741	1.34196	1.34153	1.34112	1.34072	1.34034	1.33998	1.33966	1.33933	
12.0	1.34274	1.34226	1.34180	1.34137	1.340%	1.34057	1.34019	1.33983	1.33951	1.33919	
14.0	1.3425P	1.34709	1.34163	1-34120	1.34079	1.34040	1.34003	1.33967	1.33934	1.33901	
16.0	1.34241	1.34192	1.34145	1.34102	1.34061	1.34023	1.33986	1.33950	1.33916	1.33883	
14.0	1.34277	1,34173	1.34124	1.34083	1.34042	1.34004	1.33968	1.33932	1.33497	1.33864	
20.0	1.34202	1.34153		1.34064	1.34023	1.33985	1.33948	1.33912	1.33877	1.33044	
72.0	1.34181	1.34132	1.34087	1.34043	1.34602	1.33964	1.33926	1.33890	1.33854	1.33823	
24.0	1.34159	1.34111	1.34065	1.34022	1.33951	1.33942	1.33904	1.33660	1.33834	1.33601	
\$6.0	1.34136	1.34088	1.34043	1.33999	1.33958	1.33919	1.33801	1.33845	1.33812	1-33779	
28.0	1.34117	1.34064	1.34019	1.33975	1.33934	1.33896	1.33859	1.33823	1.33780	1.33756	
30.0	1.34027	1.34039	1.33994	1.33950	1.33909	1.33671	1.33835	1-33799	1.33764	1.33732	
	400.0	#1C.0	W50.0	430.0	640.0	450.0	660.0	470.0	<b>A80.0</b>	490.0	700.0
0.0	1.33952	1.33922	1.33894	1.33864	1.33840	1.33813	1.33700	1.33763	1.33739	1.33715	:.33//93
2.0	1.33946	1.33916	1.33487	1.33840	1.33033	1.33806	1.33781	1.33756	1.33733	1.33710	1.3368R
4.0	1.33938	1.33908	1.33479	1.33851	1.33824	1.33798	1.33772	1.33748	1.33724	1.33702	1.33400
6.0	1.31927	1.33897	1.33869	1.33841	1.33614	1.33747	1.33762	1.33738	1.33714	1.33692	1.33670
8.0	1.33916	1.33886	1.33857	1.33829	1.33802	1.33775	1.33750	1.33726	1.33707	1.33680	1.33658
1C.0	1.33902	1.33673	1.33844	1.33815	1.33748	1.33762	1.33734	1.33712	1.33689	1.33666	1.33645
12.0	1.33EA7	1.33857	1.33828	1.33800	1.33773	1.33747	1-33721	1.33697	1.33674	1.33651	1.33630
14.0	1.33869	1.33439	1.33811	1.33783	1.33757	1.33730	1.33705	1.33601	1.33657	1.33635	1.33613
16.0	1.33851	1.33822	1.33793	1.33766	1.33739	1.33713	1-33687	1.33663	1.33639	1.33616	1.33594
14.0	1.33033	1.33407	1.33774	1.33747	1.33720	1.33694	1.3366R	1.33644	1.33620	1.33597	1.33574 1.33554
20.0	1.33513	1.33783	1.33754	1.33727	1.33700	1.33674	1.33648	1.33624	1.33600	1.33556	1.33534
22.0 24.0	1.33770	1.33762	1.33712	1.33684	1.33657	1.33631	1.33606	1.33581	1.33577	1.33535	1.33513
26.0	1.33747	1.33717	1.33489	1.33661	1.33635	1.3360H	1.33583	1.33559	1.33535	1.33513	1.33491
28.0	1.33724	1.33694	1.33666	1.33638	1.33611	1.33585	1.33560	1.33535	1.33512	1.33449	1.33468
30.0	1.33700	1.33670	1.33642	1.33614	1.33547	1.33540	1.33535	1.33511	1.33407	1.33465	1.33443
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TEMP					AVAETR	107M (mm)	)				
°C	400.0	416.0	420.0	430.0	440.0	450.0	440.0	470.0	480.0	490.0	·
0.0	1.35059	1.34944	1.34879	1.34797	1.34723	1.34453	1.34506	1.34525	1.34467	1.34413	
2.0	1.35050	1.34958	1.34871	1.34707	1.34715	1.34646	1.34579	1.34518	1.34440	1.34404	
4.0	1.35040	1.34948	1.34861	1.34789	1.34706	1.34437	1.34571	1.34509	1.34451	1.34396	
4.0	1.35030	1.34936	1.34850	1.34769	1.34495	1.34626	1.34540	1.34496	1.34441	1.34367	
8.0	1.35018	1.34924	1.34038	1.34757	1.34683	1.34614	1.34548	1.34406	1.34429	1.34374	
10.0	1.35005	1.34912	1.34025	1.34743	1.34667	1.34600	1.34534	1.34472	1.34+15	1.34361	
12.0	1.34990	1.34097	1.34609	1.34728	1.34654	1.34504	1.34518	1.3445 7	1.34399	1.34345	
14.0	1.34974	1.34863	1.34793	1.34711	1.34637	1.34567	1.34501	1.344+0	1.34963	1.34329	
16.0	1.34956		1:34776	1.34674	1.34619	1.34549	1.34433	1.34422	1.34365	1.34311	
18.0 20.6	1.34937	1.34824	1.34737	1.34656	1.34671	1.34510	1.34464	1.34403	1.34346	1.34292	
22.0	1.34895	1.34803	1.34716	1.34634	1.34540	1.34489	1.34423	1.34361	1.34305	1.34251	
24.0	1.34873	1.34781	1.34493	1.34612	1.34538	1.34447	1.34401	1.34339	1.34282	1.34229	
24.0	1.34849	1.34757	1.34667	1.34588	1.34514	1.34444	1.34378	1.34316	1.34259	1.34205	
28.0	1.34824	1.34732	1.34645	1.34543	1.34.49	1.34420	1.34354	1.34292	1.34235	1.34161	
30.0	1.34799	1.34706	1.34619	1.34537	1.34464	1.34395	1.34329	1.34268	1.34210	1.34157	
	500.0	510.5	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.34362	1.34313	1.34268	1.34224	1.34183	1.34144	1.34104	1:34070	1.34036	1.34003	
2.0	1.34355	1.34307	1.34260	1.34217	1.34175	1.34137	1.34100	1.34064	1.34030	1.33997	
4.0	1.34346	1.34298	1.34251	1.34207	1.34166	1.34128	1.34091	1.34056	1.34022	1.33988	
6.0	1.34335	1.34287	1.34241	1.34197	1.54156	1.34117	1.34080	1.34044	1.34011	1.33978	
8.0	1.34323	1.34274	1.34229	1.34106	1.34144	1.34105	1.34067	1.34032	1.33999	1.33966	
10.0	1.34309	1.34260	1.34215	1.34172	1.34131	1.34091	1.34053	.34017	1.33785	1.33952	
12.0	1.34294	1.34245	1.34199	1.34154	1.34115	1.34074	1.34038	1.34002	1.33970	1.33936	
14.0	1.34277	1.34228	1.34182	1.34139	1.340%	1.34059	1.34022	1.33964	1.33953	1.33919	
16.0	1.34259	1.34210	1.34164	1.34170	1.34079	1.34042	1.34005	1.33969	1.33934	1.33901	
18.0	1.34240		1.34145	1.34102	1.34061	1.34023	1.33986	1.33950	1,33916	1.33682	
20.0	1.34220	1.34171	1.34126	1.34082	1.34042	1.34003	1.33966	1.33939	1.338%	1.33843	
22.0 24.0	1.34199	1.34151	1.34105	1.34062	1.34021	1.33982	1.33944	1.33908	1.33675	1.33842	
25.0	1.34155	1.34107	1.34061	1.34017	1.33976	1.33937	1.33900	1.33864	1.33653	1.33797	
28.0	1.34131	1.34043	1.34037	1.33994	1.33952	1.33914	1.33876	1.33840	1.33807	1.33774	
30.0	1.34106	1.34050	1.34012	1.33968	1.33920	1.33090	1.33857	1.33817	1.33782	1.33750	
	600.0	610.0	420.0	630.0	649.0	<b>450.0</b>	440.0	670.0	680.0	690.0	700.0
0.0	1.33972	1.33942	1.33913	1.33206	1.33059	1.33433	1.33807	1.33782	1.33756	1.33735	1.93713
2.0	1.33965	1.33935	1.33906	1.33879	1.33852	1.33826	1.33800	1.33776	1.33752	1.33729	1.33707
4.0	1.33956	1.33926	1.33898	1.33870	1.33843	1.33017	1.33792	1.33767	1.33744	1.33721	1.33699
4.0	1.33947	1-33916	1.33666	1.33860	1.33033	1-33806	1.33781	1.33757	1.33733	1.33711	1.33689
*.0	1.33935	1.37905	1.33876	1.33048	1.33821	1.33794	1.33769	1.33744	1.33721	1.33699	1.33677
19.0	1.33921	1.33891	1-33842	1.33834	1.33607	1.33780	1.33755	1.33731	1.33707	1.33685	1.33663
12.0	1.33905	1.33076 1.33858	1.33847	1.33819	1.33792	1.33765	1.33740	1.33716	1.33692	1.33670	1.23648
14.0 16.2	1.33870	1.33840	1.33812	1.33784	1.33757	1.33731	1.33706	1.33699	1.33676	1.33653	1.33631
26.0	1.33851	2.33821	1.33793	1.33765	1.33738	1.33712	1.33687	1.33662	1.33657	1.33434	1.33592
20.0	1.33831	1.33001	1.33773	1.33745	1.33718	1.33492	1.33646	1.33642	1.33618	1.33594	1.33572
22.0	1.33010	1.33780	1.33751	1.33724	1.33697	1.33671	1.33645	1.33621	1.33597	1.33574	1.33551
24.0	1.33786	1.33750	1.33730	1.33702	1.33675	1.33649	1.33624	1.33599	1.33575	1.33552	1.33531
26.0	1.33765	1.33735	1.33707	1.33479	1.33652	1.33626	1.33601	1.33577	1.33553	1.33531	1.33509
28.0	1.33742	1.33712	1.33683	1.33454	1.33629	1.33603	1.33577	1.33553	1.33529	1.33507	1.37125
30.0	1.33714	1.33689	1.33660	1.33672	1.33405	1.33578	1.33553	1.33528	1.33505	1.33482	1.3344

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TEMP					. SALIN'T	¥ (•/🖦) —		·			<del></del>
o <sub>C</sub>	400.0	410.0	420.0	450.0	440.0	450.0	460.0	470.0	480.0	490.0	•
0.0	1.3>079	1.34987	1.34899	1.34818	1.34743	1.34675	1.34607	1.34545	1.34487	1.34433	
2.0	1.35071	1.34978	1.34891	1.34809	1.34735	1.34466	1.34600	1.34538	1.34480	1.34426	
4.0	1.35061	1.34969	1.34881	1.34800	1.34726	1.34656	1.34590	1:34529	1.34471	1.34417	
6.0	1.35050	1.34958	1.54870	1.34789	1.34715	1.34645	1.34580	1.34518	1.34460	1.34406	
F.O	1.35038	1.34445	1.34858	1.34777	1.34703	1.34633	1.34567	1.34506	1.34448	1.34394	
10.0	1.35025	1.34932	1.34844	1.34763	1.34699	1.34619	1.34553	1.34492	1.34434	1.34380	
12.0	1.35010	1.34417	1.34829	1.34748	1.34673	1.34603	1.34537	1.34476	1.34418	1.34364	
14.0	1.34993	1.34900	1.34813	1.34731	1.34656	1.34586	1.34520	1.34459	1.34402	1.34348	
16.0	1.34975	1.34883	1.34795	1.34713	1.34638	1.34568	1.34502	1.34440	1.34384	1.34330	
18.0	1.34954	1.34864	1.34776	1.34645	1.54020	1.34549	1.34483	1.34421	1.34365	1.34311	
20.0	1.34936	1.34844	1.34756	1.34675	1.34600	1.34579	1.3446.	1.34401	1.34345	1.34291	
22.0	1.34914	1.34827	1.34735	1.34653	1.34579	1.34508	1.34442	1.34380	1.34323	1.34270	
24.0	1.34492	1.34800	1.34712	1.34631	1.34556	1.34486	1.34420	1.34358	1.34301	1.34247	
26•N	1.34869	1.34776	1.34688	1.34607	1.34553	1.34463	1.34397	1.34335	1.54277	1.34274	
28.U	1.34844	1.34751	1.34663	1.34582	1.34508	1.34439	1.34373	1.34311	1.34253	1.34200	
30.0	1.34818	1.34725	1.34637	1.34550	1.344+2	1.54413	1.34348	1-24286	1.34228	1.3417>	
	500.0	510.0	520.0	530.0	540.C	550.0	560.0	>/0.0	560-0	590.0	
0.0	1.34382	1.34333	1.34268	1.34244	1.34203	1.34164	1.34126	1.34090	1.34056	1.34023	
2.0	1.34375	1.34326	1.34280	1.34236	1.34195	1.34157	1.34120	1.34084	1.34049	1.34016	
4.0	1.34365	1.34317	1.34271	1.34227	1.34185	1.34148	1.34111	1.34076	1.34041	1.3400#	
6.0	1.34355	1.34306	1.34250	1. 14216	1.34175	1.34137	1.34099	1.34064	1.34030	1.33997	
e.0	1.54347	1.34294	1.34748	1.34205	1.3416-	1.34124	1.34080	1.34051	1.34018	1.339#5	
10.0	1.34378	1.34279	1.34234	1.34191	1.34150	1.44110	1.3-072	1.34036	1.34004	1.33971	
12.0	1.34313	1.34264	1.34218	1.34175	1.34134	1.34095	1.34057	1.34021	1.33488	1.33955	
14.0	1.34296	1.54747	1.34201	1.34157	1.34116	1.34076	1.34041	1.34005	1.33971	1.33938	
16.0	1.34278	1 4 2 2 9	1.44183	1.34139	1.340%	1.34060	1.34073	1.33487	1.33453	1.33920	
18.0	1.35259	1.34210	1.34164	1.34120	1.340-0	1.04041	1.34004	1.53968	1.33934	1.33901	
30.0	1.34239	1.34190	1.34144	1.34101	1.34050	1.34022	1.33964	1.33.40	1-33614	1.33661	
22.0	1.54218	1.34169	1.34124	1.34080	1.34039	1.34001	1.33963	1.33426	1.33643	1.33860	
74.0	1.34106	1.34149	1.34102	1.34058	1.34017	1.33978	1.33941	1.33405	1.3367!	1.33630	
26.0	1.34173	1.34125	1.34079	1.34036	1.33 994	1.13955	1.33918	1.33882	1.33848	1.33815	
24.0	1.34149	1.34101	1.34455	1.34017	1.33471	1.33432	1.33894	1.33858	1.33825	1.33791	
30.0	1. 54124	1.44076	1. 340 50	1.33487	1.33946	1.33908	1.33H71	1.33835	1.33801	1.33768	
	600.0	610.0	520.0	0.066	640.0	650.0	0.000	670.0	680-0	590.0	700.0
0.0	1.33991	1.33961	1.33433	1.33405	1.33879	1.33852	1.33827	1.33#02	1.33778	1.33755	1.33732
2.0	1.33985	1.33955	1.33926	1.33898	1.33472	1.33845	1.33820	1.33745	1.33771	1.33748	1.33726
4.0	1.33970	1.33447	1.33418	1.33890	1.33863	1.33436	1.33011	1.33746	1.33763	1.33740	1.33718
٠.٥	1.33965	1.33935	1.33907	1.33879	1.33852	1.33825	1.33800	1.33776	1.33752	1.33730	1.3370R
9.0	1.33954	1.33924	1.33695	1.33867	1.33840	1.33813	1.33788	1.33763	1.33740	1.33717	1.33696
10.0	1.33940	1.33910	1.33881	1.33853	1.33826	1.33799	1.33774	1.33749	1.33726	1.33704	1.33682
12.0	1.339?4	1.33844	1.33865	1.33837	1.33810	1.33784	1.33759	1.33734	1.33711	1.33688	1-33667
14.0	1.33906	1.33676	1.33846	1.35820	1.33794	1.33767	1.33742	1.33/18	1.33694	1.33672	1.33650
16.0	1.33688	1.33858	1.33H30	1.33802	1.33776	1.33749	1.33724	1.33699	1.33075	1.33652	1.33630
18.0	1.33869	1-33639	1.33811	1.33783	1.33757	1.33730	1.33705	1.33680	1.33056	1.33633	1.33610
50.0	1.33849	1.33819	1.33790	1.33763	1.33736	1.33710	1.33684	1.33660	1.33056	1.33612	1.33540
22.0	1.33624	1,3379#	1.33770	1.33742	1.33715	1.33659	1.33665	1.33639	1.34615	1.33592	1.33569
24.0	1.33506	1.33776	1.33747	1.33770	1.33693	1.33667	1.33642	1.33617	1.33593	1.33570	1.33548
26.0	1.33763	1.33753	1.33725	1.33697	1.33670	1.33644	1.33619	1.33595	1.33571	1.32,49	1.33527
28.0	1.33760	1.33730	1.33/01	1.53674	1.33647	1.33621	1.33595	1.33571	1.33547	1.33525	1.33563
30.0	1.33736	1.33706	1.33677	1.33650	1.33622	1.33596	1.33571	1.33546	1.33573	1.33500	1.23474

ASSESSED PROGRAMMENT CONTROL PROGRAMMENT OF PROGRAMMENT ASSESSED ASSESSED FOR A PROGRAMMENT OF THE PROGRAMMENT OF

**(j)** 

\$ = 33 1/40

TEMP					yayel en	GTH (ma)					<del></del> -
°C	400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	•
0.0	1.35100	1.35007	1.34920	1.34838	1.34763	1.34693	1.34627	1.34565	1.34507	1.34453	
2.0	1.35091	1.34999	1.34911	1.34830	1.34756	1.34686	1.34620	1.34558	1.34500	1.34446	
4.0	1.35041	1.34989	1.34901	1.34820	1.34746	1.34676	1.34610	1.34548	1.34491	1.34437	
6.0	1.35070	1.34978	1.34890	1.34809	1.34735	1.34665	1-34599	1.34538	1.34480	1.34426	
8.0	1.35056	1.34965	1.34878	1.34796	1.34722	1.34653	1.34587	1.34525	1.34467	1.34413	
10.0	1.35044	1.34952	1.34864	1.34782	1.34708	1.34634	1.34573	1.34511	1.34453	1.34399	
12.0	1.35030	1.34937	1.34849	1.34767	1.34692	1.34622	1.34556	1.34495	1.34438	1.34384	
14.0	1.35013	1.34920	1.34832	1.34750	1.34674	1.3460>	1.34539	1.34478	1.34421	1.34367	
16.0	1.34995	1.34902	1.34614	1.34732	1.34657	1.34587	1.34521	1.34459	1.34403	1.34349	
18.0	1.34976	1.34483	1.34795	1.34714	1.34639	1.34568	1.34502	1.34440	1.34384	1.34330	
20.0	1.34955	1.34863	1.34775	1.34694	1.34619	1.34548	1.34482	1.34420	1.3436.	1.34309 1.34288	
22.0	1.34934	1.34841	1.34754	1.34673	1.3454	1.34527	1.34461	1.34349	1.34342	1.34266	
24.0	1.34911	1.34819	1.34731	1.34650	1.34575	1.34505	1.34439	1.34377	1.34319	1.34243	
26.0	1.34888	1.34795	1.34707	1.34626	1.34552	1.34482	1.34415	1.34353	1.34277	1.34218	
23.0	1.34863	1.34770	1.34682	1.34601	1.34527	1.34457	1.34391	1.34329	1.34247	1.34193	
30.0	1.34837	1.34744	1.34656	1.34575	1.34501	1.34432	1.34366	1.34305	1.37271	1.3-173	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
					1 14 12 2	1.34184	1.34147	1.34110	1.34075	1.34043	
0.0	1.34402	1.34353	1.34508	1.34264	1.34223	1.34176	1.34139	1.34103	1.34069	1.34036	
2.0	1.34395	1.34346	1.34300	1.34256	1.34205	1.34167	1.34130	1.34095	1.34060	1.34027	
4.0	1.34386	1.34337	1.34291	1.34246	1.34145	1.34156	1.34118	1.34083	1.34050	1.34016	
6.0	1.34374	1.34326	1.34280	1.34224	1.34183	1.34143	1.34105	1.34070	1.34037	1.3.004	
8.0	1.34361	1.34313	1.34253	1.34210	1.34169	1.34130	1.34091	1.34055	1.34023	1.33990	
10.0 12.0	1.34332	1.342#3	1.34237	1.34194	1.34153	1.34114	1.34076	1.34040	1.34007	1.33974	
14.0	1.34315	1.34266	1.34220	1.34176	1.34135	1.34097	1.34059	1.34023	1.33990	1.33957	
16.0	1.34297	1.34248	1.34202	1.34158	1.34117	1.34079	1.34042	1.34906	1.33971	1.33938	
18.0	1.34278	1.34229	1.34182	1.34139	1.34078	1.34060	1.34027	1.33986	1.33952	1.33919	
20.0	1.34257	1.34208	1.34163	1.34119	1.34074	1.34040	1.34002	1.33906	1.33932	1.33899	
22.0	1.34236	1.34188	1.34142	1.34099	1.34058	1.34019	1.33941	1.33945	1.33911	1.33876	
24.0	1.34214	1.34166	1.34120	1.34077	1.34035	1.33997	1.33959	1.33923	1.33889	1.33856	
26.0	1.34192	1.34143	1.34097	1.34054	1.34012	1.33974	1.33937	1.33901	1.33866	1.33833	
28.0	1.34167	1.34119	1.34074	1.34030	1.33989	1.33950	1.33913	1.33877	1.33843	1.33810	
30.0	1.34142	1.34094	1.34049	1.34005	1.33964	1.33926	1.33888	1.33653	1.33819	1.33745	
	600.0	610.0	620.0	630.0	640.0	450.0	660.0	670.0	640.0	690.0	700 • G
	1 34011	1.339#2	1.33953	1.32925	1.33898	1.33872	1.33846	1.33821	1.33797	1.33774	1.33752
0.0	1.34011	1.33974	1.33946	1.33918	1.33891	1.3386>	1.33839			1.33768	1.33746
2.0 4.0	1.33995	1.53965	1.33937	1.33909	1.33 862	1.33856	1.33630			1.33759	1.33737
6.0	1.33985	1.23955		1.33898	1.33871	1.33845	1.33817			1.33749	1.33727
8.0	1.33973	1.33943		1.33886	1.33858	1.33832	1.33807	1.33782	1.33759	1.33736	1.33715
10.0	1.33959	1.33929		1.33872	1.33844	1.33818	1.33793	1.33768		1.33722	1.33701
12.0	1.33943	1.33913		1-33956	1.33 829	1.33803	1.33777			1.33707	1.33685
14.0	1,33925			1.33839	1.33812	1.33786					1.33668
16.0	1.33906	1.33877	1.33848	1.33821	1.33794	1.33768	1.33742			1.33471	1.33649
18.0	1.33887	1.33857		1.33801	1.33775	1.33748				1.33651	1.33628
20.0	1.33867			1.33781	1.33755	1.33728	1.33703			1.33630	1.3360A
22.0	1.33844			1.33760	1.33733	1.33707					1.33587
24.0	1.33824			1.33736	1.33711	1.336#5				1.33588	1.33545
26.0	1.33602			1.33715	1.336₹	1.33662					1.33521
28.0	1.33778			1.33692	1.33665	1.33638					1.33496
30.0	1.33753	1.33723	1.33695	1.33667	1.33640	1.33414	1.33589	1.33564	1 - 5 - 5 - 5 - 1	1.000010	

Table A-4. (cont)

A Common Maria Common C

				(k	)					\$ = 34 %
				vavel en	OTH (mm)					
400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	•
1.35121	1.35028	1.34940	1.34858	1.34784	1.34713	1.34447	1.34585	1.34527	1.34473	
1.35111	1.35019	1.34932	1.34850	1.34776	1.34706	1.34639	1.34577	1.34520	1.34446	
. ,35101	1.35009	1.34921	1.34840	1.34766	1.34496	1.34430	1.34568	1.34511	1.34457	
1.35090	1.34998	1.34910	1.34829	1.34755	1.34685	1.34619	1.34557	1.34499	1.34445	
1.35077	1.34905	1.34898	1.34016	1.34742	1.34672	1.34606	1.34545	1.34487	1.34433	
1.35044	1.34972	1.34884	1.34802	1.34728	1.34658	1.34592	1.34530	1.34473	1.34418	
1.35049	1-34956	1.34868	1.34786	1.34712	1.34642	1.34576	1.34514	1.34457	1.34403	
1.35032	1.34939	1.34851	1.34770	1.34695	1.34624	1.34558	1.34497	1.34440	1-34386	
1.34995	1.34921	1.34833	1.34752	1.34677	1.34606	1.34540	1.34478	1.34422	1.34348	
1.34974	1.34882	1.34795	1.34713	1.34636		1.34501	1.34439	1.34382	1.34328	
1.34953	1.34841	1.34773	1.34691	1.34617	1.34567	1.34474	1.34418	1.34361	1.34307	
1.34930		1.34750	1.34669	1.34594	1.34524	1.34457	1.34395	1.34338	1.34284	
1.34907	1.34814	1.34726	1.34645	1.34570	1.34500	7.34434	1.34372	1.34314	1.34261	
1.34852		1.34701	1.34620	1.34546	1.34476	1.34410	1.34348	1.34291	1.34237	
1.34856		1.346/5	1.34594	1.34520	1.34451	1.34385	1.34323	1.34265	1.34212	
500.0	510.0	520.0	530.0	540.0	550.u	540.0	570.0	580.0	27020	
1.34422	1.34373	1.34328	1.34284	1.34243	1.34204	1.34166	1.34129	1.34095	1.34062	
1.34414		1.34320	1.34276	1.34234	1.34196	1.34159	1.34123	1.34089	1.34055	
1.34405		1.34310	7 - 34264	1.34224	1.34186	1.34150	1.34114	1.34074	1.34047	
1.34394		1.34299	1.34255	1.34214	1.34175	1.34138	1.34102	1.34069	1.34036	
1.34381	1.34332	1.34286	1.34243	1.34202	1.34163	1.34125	1.34089	1.34056	1.34023	
1.34344	1.34317	1.34272	1.34229	1.34188	1.34149	1.34110	1.34074	1.34042	1.34009	
1.34351	1.34302	1.34256	134213	1.34172	1.34132	1.34094	1.34058	1-34026	1.33993	
1.34334	1.34285	1.34239	1.34195	1.34154	1.34115	1.34078	1.34042	1.34009	1.33975	
1.34314	1.34267	1.34220	1.34176	1.34135	1.34097	1.34060	1.34024	1.33990	1.33957	
1.34296	1.34247	1.34201	1.34158	1.34117	1,34078	1.34041	1.34005	1.33971	1.33937	
1.34274		1.34181	1.34138	1.34097	1.3405#	1.34021	1.33984	1.33951	1.33917	
1.34255		1.34160	1.34117	1.34076	1.34037	1.33999	1.33963	1.33929	1.33896	
1.34233		1.34139	1.34095	1.34054	1.34015	1.33977	1.33941	1-33907	1-33674	
1.34210		1.34116	1.34072	1.34031	1.33992	1.33954	1.33918	1.33884	1.33851	
1.34184		1.34092	1.34048	1.34007	1.33768	1.33931	1.33895	1.33061	1.33828	
1.34161	1.34112	1.34067	1.34023	1.33462	1.33944	1.33907	1.33871	1.33837	1.33804	
600.0	610.0	620.0	630.0	640.0	650.0	660.0	670.0	680.0	690.0	700.0
1.34030		1.33972	1.33945	1.33910	1.33891	1.33800	1.33841	1.33417	1.33794	1.33771
1.34023		1.33965	1.33937	1.33910	1.33884	1.33858	1.33634	1.33810	1.33767	1.33765
1.34C15		1.33956	1.33928	1.33901	1.33675	1.33849	1.33825	1.33001	1.33778	1.33757
1.34004		1.33945	1,33917	1.33890	1.33844	1.33836	1.33814	1.33790	1.33768	1.33746
1.33997		1.33933	1.33905	1.33877	1.33851	1.33625	1.33601	1.33778	1.33755	1.33733
1.33970		1.33919	1.33891	1.336.3	1.33437	1.33811	1.33787	1.33763	1.33741	1.33719
1.33942		1.33903	1.33875	1.33846	1.33621	1.33796	1.33771	1.33748	1.33725	1.33704
1.33944		1.33885	1.33857	1.37 231	1.33#04	1.33779	1.33754	1.33731	1.33703	1.73686
1-33925		1.33866	1.33839	1.33612	1.33786	1.33760	1.33734	1.33712	1.33689	1.33667
1.33904		1.33847	1.33820	1.33793	1.33767	1.33741	1.33716	1.33692	1.33669	1.33646
1.33084		1.33027	1.33800	1.33773	1.33746	1.33721	1.336%	1.33672	1.33648	1.33626
1.33064		1.33806	1.33778	1.33751	1.33725	1.33699	1.33675	1.33651	1.33627	1.33605
1.33042		1.33743	1.33756	1.33729	1.33703	1.33677	1.33653	1.33629	1.33584	1.33562
1.33794		1.33737	1.33710	1.33483	1.33556	1.33631	1.33606	1.33583	1.33560	1.33539
1.33772		1.33713	1.33685	1.33658	1.33632	1.33406	1.33582	1.33558	1.33535	1.33514

ANNO MATERIAL PARAMETER IN THE SAME OF THE SAME WAS AND THE SAME OF THE SAME O

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					1.1						S = 35 %
TEMP					VAVELET!	GTH (nm)					
°C	400.0	+10.0	420.0	430.0	449.0	450.0	460.0	470.0	480.0	490.0	•
0.0	1.35141	1.35049	1.34961	1.34879	1.34804	1.34734	1.34667	1.34605	1.34548	1.34494	
2.0	1.35132	1.35040	1.34952	1.34870	1.34796	1.34726	1.34659	1.34597	1.34540	1.34486	
4.0	1.35121	1.35029	1.34941	1.34860	1.34786	1.34716	1.34650	1.34588	1.34530	1.34476	
6.0	1.35110	1.35018	1.34930	1.34849	1.34775	1.34705	1.34639	1.34577	1.34519	1.34465	
8.0	1.35098	1.35005	1.34917	1.34836	1.34762	1.34692	1.34626	1.34564	1.34506	1.34452	
10.0	1.35084	1.34991	1.34903	1.34822	1.34747	1.34678	1.34612	1.34550	1.34492	1.34437	
12.0	1.35049	1.34976	1.34888	1.34806	1.34731	1.34661	1.34595	1.34533	1.34476	1.34422	
14.0	1.35052	1.34759	1.34871	1.34789	1.34714	1.34444	1.34577	1.34516	1.34459	1.34405	
16.0	1.35034	1.34941	1.34853	1.34771	1.34696	1.34625	1.34559	1.34497	1.34441	1.34387	
10.0	1.35014	1.34922	1.34834	1.34752	1.34677	1.34606	1.34539	1.34478	1.34421	1.34367	
20.0	1.34994	1.34902	1.34814	1.34732	1.34657	1.34586	1.34519	1.34458	1.34401	1.34347	
22.0	1.34972	1.34880	1.34792	1.34711	1.34636	1.34565	1.34498	1.34436	1.34379	1.34325	
24.0	1.34950	1.34857	1.34769	1.34688	1.34613	1.34542	1.34476	1.34414	1.34357	1.34303	
24.0	1.34926	1.34833	1.34745	1.34664	1.34589	1.34519	1.34453	1.34391	1.34333	1.34280	
28.0	1.34901	1.34808	1.34720	1.34639	1.34564	1.34495	1.34429	1.34367	1.34309	1.34255	
30.0	1.34875	1.34782	1.34694	1.34613	1.34539	1.34469	1.34+04	1.34342	1.34284	1.34230	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.24442	1.34393	1.34347	1.34304	1.34263	1.34224	1.34186	1.34149	1.34115	1.34082	
2.0	1.34434	1.34386	1.34339	1.34295	1.34254	1.34216	1.34179	1.34143	1.34108	1.34075	
4.0	1.34425	1.34376	1.34330	1.34285	1.34243	1.34206	1.34170	1.34134	1.34099	1.34066	
6.0	1.34413	1.34365	1.34318	1.34274	1.34233	1.34194	1.34157	1.34122	1.34088	1.34055	
8.0	1.34400	1.34351	1.34306	1.34262	1.34221	1.34182	1.34144	1.34108	1.34075	1.34042	
10.0	1.34385	1.34337	1.34291	1.34248	1.34207	1.34167	1.34129	1.34093	1.34061	1.34028	
12.0	1.34370	1.34321	1.34275	1.34232	1.34191	1.34151	1.34113	1.34077	1.34045	1.34011	
14.0	1.34353	1.34304	1.34257	1.34214	1.34173	1.34134	1.34096	1.34061	1.34021	1.33994	
16.0	1.34334	1.34285	1.34239	1.34195	1.34154	1.34116	1.34079	1.34043	1.34009	1.33975	
18.0	1.34315	1.34266	1.34220	1.34176	1.34135	1.34097	1.34040	1.34923	1.33989	1.33956	
20.0	1.34295	1.34246	1.34200	1.34157	1.34116	1.34077	1.34039	1.34003	1.33969	1.33936	
27.0	1.34273	1.34225	1.34179	1.34136	1.34095	1.34055	1.34017	1.33981	1.33947	1.33914	
24.0	1.34251	1.34203	1.34157	1.34114	1.34072	1.34933	1.33995	1.33959	1.33925	1.33892	
26.0	1.34228	1.34180	1.34134	1.34091	1.34049	1.34010	1.33972	1.33936	1.33902	1.33869	
28.0	1.34204	1.34156	1.34110	1.34066	1.34025	1.33986	1.33949	1.33913	1.33479	1.33846	
30.0	1.34179	1.34131	1.34085	1.34041	1.34000	1.33962	1.33925	1.33889	1.33455	1.33822	
	600.0	610.0	620.0	630.0	640.0	650.0	660.0	670.0	600.0	690.0	700.0
0.0	1.34050	1.34020	1.33992	1.33964	1.33937	1.33911	1.33885	1.33840	1.33836	1.33813	1.33791
2.0	1.34044	1.34014	1.33985	1.33957	1.33930	1.33903	1.33876	1.33853	1.33829	1.33806	1.33744
4.0	1.34035	1.34005	1.33976	1.33948	1.33920	1.33894	1.33848	1.33844	1.33820	1.33798	1.33776
4.0	1.34023	1.33993	1.33964	1.33936	1.33909	1.33683	1.33857	1.33833	1-33809	1.33787	1.33755
8.0	1.34011	1.33981	1.33952	1.33924	1.33896	1.33870	1.33844	1.33820	1.33796	1.33774	1.33752
10.0	1.33997	1.33967	1.33938	1.33910	1.33882	1.33855	1.33830	1.33006	1.33782	1.33760	1.33738
12.0	1.33980	1.33950	1.33921	1.33693	1.33866	1.33840	1.33814	1.33790	1.33766	1.33744	1.33722
14.0	1.33962	1.33932	1.33904	1.33876	1.33849	1.33823	1.33797	1.33773	1.33749	1.33727	1.33705
16.0	1.33943	1.33913	1.33885	1.33457	1.33 83 1	1.33004	1.33779	1.33754	1.33730	1.33707	1.33685
18.0	1.33924	1.33854	1.33865	1.33838	1.33611	1.33785	1.33759	1.33735	1.33710	1.33487	1.33464
20.0	1.33904	1.33874	1.33845	1.33816	1.33791	1.33765	1.33739	1.33714	1.33690	1.33666	1.33644
22.0	1.33883	1.33853	1.33824	1.3379/	1.33770	1.33743	1.33718	1.33693	1.33669	1.33645	1.33623
24.0 26.0	1.33860	1.33830	1.33802	1.33774	1.33747	1.33721	1.33695	1.33671	1.33647	1.33624	1.33602
	1.33837	1.33807	1.33778	1.33751	1.33724	1.33696	1.33672	1.33648	1.33625	1.33602	1.33580
28.0	1.33814	1.33784	1.33755	1.33727		1.33674	1.33649	1.33624	1.33601	1.33578	1.33557
30.0	1.33/90	1.33760	1.33731	1.33703	1.33676	1.33649	1.3362/	1.33599	1.33576	1.33553	1.33532

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enterental production of the content 
Table A-4. (cont)

OC         400.0         410.0         420.0         430.0         450.0         460.0         470.0         480.0         490.0           0.0         1,35162         1,35069         1,34981         1,34901         1,34825         1,34588         1,34568         1,34561         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34560         1,34660         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34660         1,34670         1,34680         1,34670         1,34680         1,34681         1,34671         1,34681         1,34681         1,34681         1,34681         1,34681         1,34671         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,34681         1,3468						{m	}					
0C	TPMD					PAVPI. PM	OTH ()				_	S = 36 %
1.35152		400.0	410.0	420.0			• -		470.0	480.0	490.0	7
4.0    1.35142    1.35038    1.34902    1.34800    1.34606    1.34530    1.34606    1.34550    1.34496    4.0    1.35117    1.35038    1.34950    1.34896    1.34791    1.34656    1.34550    1.34496    8.0    1.35117    1.35038    1.34951    1.34656    1.34782    1.34617    1.34636    1.34569    1.34517    11.0    1.35018    1.34927    1.34823    1.34611    1.34631    1.34631    1.34626    1.34471    11.0    1.35028    1.34997    1.34890    1.34800    1.34631    1.34651    1.34552    1.34471    11.0    1.35053    1.34960    1.34871    1.34508    1.34518    1.34651    1.34552    1.34451    1.34652    11.0    1.35053    1.34900    1.34872    1.34701    1.34631    1.34558    1.345515    1.34465    1.34552    1.34465    11.0    1.35031    1.34901    1.34633    1.34771    1.34664    1.34558    1.34551    1.34476    1.34568    11.0    1.35031    1.34921    1.34633    1.34771    1.34676    1.34558    1.34578    1.34569    1.34569    11.0    1.39031    1.34921    1.34633    1.34771    1.34676    1.34558    1.34578    1.34578    1.34569    11.0    1.34618    1.34621    1.34678    1.34678    1.34678    1.34578    1.34578    1.34578    1.34579    1.34688    11.0    1.34918    1.34921    1.34931    1.34770    1.34678    1.34588    1.34478    1.34478    1.34679    1.34688    11.0    1.34678    1.34672    1.34739    1.34677    1.34608    1.34538    1.34471    1.34691    1.34592    1.3478    11.0    1.34684    1.34601    1.34739    1.34657    1.34608    1.34538    1.34471    1.34691    1.34592    1.34688    11.34684    1.34681    1.34681    1.34681    1.34628    1.34628    1.34422    1.34608    1.34528    1.34628	0.0	1.35162	1.35069	1.34981	1.34900	1.34825	1.34754	1.34588	1.34625	1.34568	1.34513	
6.0 1.35130 1.35038 1.34950 1.34869 1.34774 1.34725 1.34656 1.34586 1.34592 1.34471 10.0 1.35104 1.35025 1.34937 1.34825 1.34713 1.34687 1.34681 1.34588 1.34552 1.34471 11.0 1.35104 1.35011 1.34023 1.34841 1.34767 1.34697 1.346831 1.34599 1.34511 1.34457 112.0 1.35087 1.34979 1.34907 1.34808 1.34731 1.34663 1.34696 1.34515 1.34476 1.34611 14.0 1.35072 1.34979 1.34801 1.34608 1.34761 1.34663 1.34696 1.34535 1.34478 1.34625 11.35033 1.34640 1.34672 1.34771 1.34683 1.34663 1.34596 1.34535 1.34478 1.34625 11.35034 1.34641 1.34533 1.34771 1.34696 1.34625 1.34537 1.34647 1.346405 118.0 1.35034 1.34641 1.34533 1.34771 1.34696 1.34625 1.34536 1.34676 1.34640 1.34538 1.34625 1.34637 1.34640 1.34638 1.34626 1.34639 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34640 1.34638 1.34657 1.34640 1.34638 1.34657 1.34631 1.34657 1.34640 1.34638 1.34671 1.34640 1.34638 1.34657 1.34638 1.34671 1.34640 1.34638 1.34657 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34641 1.34638 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34648 1.34658 1.34638 1.34648 1.3	2.0	1.35152	1.35040	1.34972	1.34891	1.34816	1.34740	1.34680	1.34617	1.34560	1.34506	
1.35117	4.0	1.35142	1.35049	1.34962	1.34880	1.34806	1.34736	1.34670	1.34608	1.34550	1.34496	
12.50	4.0	1.35130	1.35038	1.34950	1.34869	1.34794	1.34725	1.34658	1.34596	1.34539	1.34485	
12,00	8.0	1-35117	1.35025	1.34937	1.34856	1.34782	1.34712	1.34646	1.34584	1.34526	1.34471	
1.39072   1.34479   1.34670   1.34608   34730   1.34651   1.34551   1.34478   1.34052   1.45578   1.35518   1.34479   1.34405   1.8901   1.39034   1.34941   1.34653   1.34770   1.34676   1.34656   1.34558   1.34477   1.34400   1.34538   1.34921   1.34893   1.34931   1.34676   1.34656   1.34558   1.34477   1.34400   1.34365   1.34971   1.34489   1.34891   1.34891   1.34891   1.34891   1.34891   1.34707   1.34656   1.34558   1.34571   1.34455   1.34451   1.34452   1.34531   1.34431   1.34531   1.34521   1.34451   1.34517   1.34557   1.34551   1.34551   1.34451   1.34451   1.34521   1.34551   1.34551   1.34551   1.34451   1.34451   1.34551	10.0	1.35104	1.35011	1.34923	1.34841	1.34767	1.34697	1.34631	1.34569	1.34511	1.34457	
14.0	12.0	1.35089	1.34995	1.34907	1.34825	1.34751	1.34680	1.34614	1.34552	1.34495	1.34441	
18-0	14.0	1.35072	1.34979	1.34890	1.34808	34733	1.34663	1.34596	1.34535	1.34478	1.35524	
20.0	16.0	1.35053	1.34960	1.34872	1.34770	1.54715	1.34644	1.34578	1.34516	1.34459	1.34405	
22.0	18.0	1.35034	1.34941	1.34853	1-34771	1.34696	1.34625	1.34558	1.34497	1.34440	1.34386	
24.0	20.0	1.35013	1.34921	1.34833	1.34751	1.34676	1.34605	1.34538	1.34476	1.34420	1.34365	
28.0 1.34926 1.34852 1.34764 1.34682 1.34682 1.34588 1.34571 1.34409 1.34552 1.34278 1.34278 1.34589 1.34571 1.34688 1.34571 1.34688 1.34427 1.34386 1.34572 1.34274 1.34389 1.34581 1.34571 1.34688 1.34427 1.34386 1.34502 1.34248	22.0	1.34991	1.34899	1.34611	1.34730	1.34655	1.34584	1.34517	1.34455	1.34398	1.34344	
28.0 1.34820 1.34827 1.34739 1.34657 1.34583 1.34513 1.34447 1.34385 1.34327 1.34274 30.0 1.34894 1.34801 1.34713 1.34513 1.34557 1.34488 1.34422 1.34360 1.34302 1.34248  500.0 510.0 320.0 530.0 540.0 550.0 560.0 570.0 580.0 590.0  0.0 1.34462 1.34413 1.34368 1.34324 1.34283 1.34244 1.34205 1.34169 1.34135 1.34101 2.0 1.34454 1.34406 1.34359 1.34351 1.34274 1.34225 1.34198 1.34162 1.34128 1.34094 4.0 1.34451 1.34361 1.34368 1.34324 1.34228 1.34225 1.34218 1.34162 1.34162 1.34128 1.34095 6.0 1.34433 1.34384 1.34338 1.34294 1.34252 1.34213 1.34176 1.34160 1.34107 1.34071 8.0 1.34451 1.34371 1.34325 1.34261 1.34240 1.34201 1.34163 1.34127 1.34095 1.34061 10.0 1.34405 1.34356 1.34310 1.34267 1.34226 1.34188 1.34128 1.34112 1.34080 1.34061 12.0 1.34331 1.34284 1.34228 1.34219 1.34210 1.34103 1.34163 1.34127 1.34095 1.34061 10.0 1.34453 1.34322 1.34276 1.34233 1.34191 1.34132 1.34097 1.34011 1.34071 1.34071 10.0 1.34372 1.34322 1.34276 1.34233 1.34191 1.34133 1.34097 1.34001 1.34061 1.34072 1.33934 1.34284 1.34228 1.34195 1.34132 1.34097 1.34001 1.34097 1.34091 1.34012 10.0 1.34334 1.34284 1.34228 1.34195 1.34134 1.34097 1.34091 1.34091 1.34091 1.34097 1.34091 1.33990 1	24.0	1.34969	1.34876	1.34789	1.34707	1.34632	1.34541	1.34495	1.34433	1.34375	1.34321	
28.0	26.0	1.24945	1.34852	1.34764	1.34682	1.34608	1.34538	1.34471	1.34409	1.34352	1.34298	
500.0 510.0 320.0 530.0 540.0 550.0 560.0 570.0 580.0 590.0  0.0 1.34462 1.34413 1.34368 1.34324 1.34283 1.34244 1.34205 1.34169 1.34135 1.34101 2.0 1.34454 1.34406 1.34359 1.34315 1.34274 1.34235 1.34189 1.34152 1.34128 1.34094 4.0 1.34455 1.34396 1.34396 1.34359 1.34226 1.34223 1.34289 1.34189 1.34153 1.34118 1.34085 6.0 1.34433 1.34384 1.34338 1.34294 1.34252 1.34221 1.34189 1.34153 1.34118 1.34085 6.0 1.34431 1.34331 1.34326 1.34284 1.34252 1.34221 1.34169 1.34153 1.34178 1.34078 1.0 1.34401 1.34371 1.34325 1.34226 1.34260 1.34213 1.34176 1.34104 1.34171 1.34075 1.34061 10.0 1.34405 1.34356 1.34310 1.34267 1.34226 1.34186 1.34182 1.34096 1.34003 1.34061 12.0 1.34391 1.34322 1.34276 1.34223 1.34171 1.34132 1.34096 1.34003 1.34003 14.0 1.34372 1.34322 1.34276 1.34233 1.34191 1.34153 1.34112 1.34096 1.34003 1.34030 14.0 1.34331 1.34264 1.34228 1.34191 1.34153 1.34118 1.34079 1.34061 1.34077 12.0 1.34331 1.34264 1.34228 1.34195 1.34154 (.34116 1.34078 1.34042 1.34008 1.39994 18.0 1.34331 1.34264 1.34238 1.34195 1.34154 (.34116 1.34078 1.34097 1.34061 1.34077 1.39994 12.0 1.34331 1.34264 1.34228 1.34197 1.34154 (.34116 1.34078 1.34097 1.34061 1.39077 1.39994 12.0 1.3427 1.34292 1.34176 1.34152 1.34091 1.34057 1.34057 1.33091 1.33997 1.33994 12.0 1.3427 1.34199 1.34153 1.34109 1.34057 1.34028 1.33999 1.33996 1.33997 1.33994 12.0 1.3427 1.34199 1.34153 1.34109 1.34057 1.34028 1.33990 1.33997 1.33991 1.33992 12.0 1.3427 1.34199 1.34153 1.34109 1.34057 1.34028 1.33990 1.33951 1.33997 1.33980 1.33897 1.300 1.34071 1.34149 1.34103 1.33994 1.33907 1.33993 1.33907 1.33980 1.33910 1.34071 1.34149 1.34103 1.34005 1.34007 1.34028 1.33990 1.33991 1.33991 1.33991 1.34071 1.34149 1.34103 1.34005 1.34019 1.33907 1.33991 1.33907 1.33981 1.33907 1.33980 1.33897 1.33980 1.33891 1.33990 1.33991	28.0	1.34920			1.34657	1.34583	1.34513	1.34447	1.34385	1.34327	1.34274	
0.0 1.34462 1.34413 1.34368 1.34324 1.34283 1.34244 1.34205 1.34169 1.34135 1.34101 2.0 1.34454 1.34465 1.34466 1.34359 1.34315 1.34274 1.34235 1.34188 1.34162 1.34128 1.34084 4.0 1.34454 1.34348 1.34338 1.34294 1.34325 1.34225 1.34189 1.34153 1.34118 1.34085 6.0 1.34433 1.34384 1.34338 1.34294 1.34252 1.34221 1.34129 1.34107 1.34007 1.34007 1.34017 1.3301	30.0	1.34894	1.34801	1.34713	1.34631	1.34557	1.34488	1.34422	1.34360	1.34302	1.34248	
2.0		500.0	510.0	320.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
4.0	0.0	1.34462	1.34413	1.34368	1.34324	1.34283	1.34244	1.34205	1.34169	1.34135	1.34101	
6.0	2.0	1.34454	1.34406	1.34359	1.34315	1.34274	1.34235	1.34198	1.34162	1.34128	1.34094	
8.0	4.0	1.34445	1.34396	1.34349	1.34305	1.34263	1.34225	1.34189	1.34153	1.34118	1.34085	
12.0	6.0	1.34433	1.34384	1.34338	1.34294	1.34252	1.34213	1.34176	1.34140	1.34107	1.34074	
12.0	8.0	1.34419	1.34371	1.34325	1.34282	1.34240	1.34201	1.34163	1.34127	1.34095	1.34061	
14.0	10.0	1.34405	1.34356	1.34310	1.34267	1.34226	1.34186	1.34148	1.34112	1.34080	1.34047	
18.0	12.0	1.34389	1.34340	1.34294	1.34251	1.34210	1.34170	1.34132	1.34096	1.34063	1.34030	
18.0	14.0	1.34372	1.34322	1.34276	1.34233	1.34191	1.34153	1.34115	1.34079	1.34046	1.34012	
20.0	16.0	1.34353	1.34304	1.34258	1.34214	1,34173	1.34134		1.34061	1.34027	1.33994	
22.0	18.0	1.34334	1.34284	1.34238	1.34195	1.34154	1.34116	1.34078	1.34042	1.34008	1.33974	
24.0	20.0	1.34313	1.34264	1.34218	1.34175	1.34134	1.34095	1.34057		1.33987	1.33954	
28.0	22.0	1.34292	1.34243	1.34197	1.34154	1.34113	1.34074	1.34036	1.33999	1.33966	1.33932	
28.0	24.0	1.34270	1.34222	1.34176	1.34132	1.34091	1.34052	1.34013	1.33977	1.33943	1.33910	
30.0 1.34197 1.34149 1.34103 1.34060 1.34019 1.33980 1.33943 1.33907 1.33873 1.33840 600.0 600.0 610.0 620.0 630.0 640.0 650.0 660.0 670.0 680.0 690.0 700.0 1.34070 1.34040 1.34011 1.33984 1.33957 1.33931 1.33905 1.33880 1.33856 1.33833 1.33810 2.0 1.34042 1.34032 1.34004 1.33947 1.33949 1.33923 1.33907 1.33887 1.33849 1.33824 1.33804 1.33804 1.33804 1.33804 1.33804 1.33804 1.33805 1.33824 1.33807 1.33940 1.33913 1.33881 1.33883 1.33839 1.33817 1.33795 1.33940 1.33913 1.33881 1.33883 1.33839 1.33817 1.33795 1.33795 1.33924 1.33913 1.33881 1.33839 1.33817 1.33795 1.33795 1.33924 1.33913 1.33817 1.33795 1.33924 1.33913 1.33817 1.33793 1.33793 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33817 1.33793 1.33793 1.33817 1.33793 1.33883 1.338	26.0	1.34247	1.34199	1.34153	1.34109	1.34057	1.34028	1.33970	1.33954	1.33920	1.33887	
600.0 610.0 620.0 630.0 640.0 650.0 660.0 670.0 680.0 690.0 700.0  0.0 1.34070 1.34040 1.34011 1.33984 1.33957 1.33931 1.33905 1.33880 1.33856 1.33833 1.33810 2.0 1.34062 1.34032 1.34004 1.33976 1.33949 1.33923 1.33897 1.33873 1.33889 1.33864 1.33854 4.0 1.34053 1.34022 1.33984 1.33947 1.33940 1.33913 1.33888 1.33863 1.33839 1.33817 1.33795 8.0 1.34042 1.34012 1.33983 1.33955 1.33928 1.33901 1.33813 1.33883 1.33839 1.33817 1.33791 10.0 1.34030 1.34000 1.33971 1.33943 1.33915 1.33809 1.33863 1.33839 1.33815 1.33771 12.0 1.34036 1.33986 1.33957 1.33928 1.33901 1.33874 1.33869 1.33839 1.33817 1.33773 1.33771 12.0 1.34036 1.33969 1.33940 1.33940 1.33940 1.33851 1.33856 1.33839 1.33861 1.33778 1.33775 14.0 1.23981 1.33951 1.33922 1.33894 1.33867 1.33861 1.33814 1.33814 1.33791 1.33768 1.33745 1.33725 16.0 1.33961 1.33952 1.33903 1.33876 1.33869 1.33861 1.33777 1.33778 1.33778 1.33772 18.0 1.33942 1.33992 1.33883 1.33856 1.33809 1.33877 1.33773 1.33778 1.33775 1.33768 1.33775 1.33861 1.338	28.0	1.34223	1.34174	1.34129	1.34085	1.3404-	1.34005	1.33967	1.33931	1.33897	1.33864	
0.0	30.0	1.34197	1.34149	1.34103	1.34060	1.34019	1.33980	1.33943	1.33907	1.33873	1.33840	
2.0		600.0	610.0	620.0	630.0	640.0	650.0	660.0	670.0	680.0	690.0	700.0
4.0 1.34053 1.34021 1.33984 1.33987 1.33940 1.33913 1.33888 1.33863 1.33839 1.33817 1.33798 8.0 1.34030 1.34030 1.33983 1.33983 1.33955 1.33798 1.33902 1.33870 1.33870 1.338305 1.338305 1.338305 1.33784 1.33830 1.33839 1.338305 1.33784 1.33830 1.33839 1.338305 1.33783 1.33784 1.33830 1.33839 1.33830 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380 1.3380												1.33810
6.0         1.34042         1.34012         1.33983         1.33985         1.33928         1.33902         1.33807         1.33852         1.33828         1.33805         1.3378           8.0         1.34030         1.34080         1.33971         1.33933         1.33915         1.33804         1.33803         1.33815         1.33773         1.33771           10.0         1.34016         1.33984         1.33957         1.33991         1.33801         1.33804         1.33804         1.33801         1.33801         1.33801         1.33762         1.33772         1.33763         1.33763         1.33762         1.33762         1.33772         1.33763         1.33763         1.33762         1.33762         1.33772         1.33772         1.33763         1.33763         <												
8.0 1.34030 1.34000 1.33971 1.33943 1.33915 1.33889 1.33889 1.33819 1.33815 1.33773 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33771 1.33772 1.33772 1.33773 1.33773 1.33773 1.33773 1.33773 1.33773 1.33774 1.												
10.0 1.34016 1.33986 1.33957 1.33928 1.33901 1.33874 1.33849 1.33824 1.33801 1.33778 1.33778 1.33757 12.0 1.33999 1.33999 1.33990 1.33940 1.33941 1.33885 1.33885 1.33889 1.33809 1.33785 1.33762 1.33745 1.33761 1.33761 1.33961 1.33961 1.33951 1.33961 1.33961 1.33961 1.33961 1.33961 1.33903 1.33894 1.33867 1.33841 1.33816 1.33791 1.33768 1.33745 1.33725 1.33720 1.33961 1.33961 1.33961 1.33961 1.33883 1.33856 1.33849 1.33829 1.33977 1.33772 1.33788 1.33725 1.33705 1.33684 1.33861 1.33861 1.33861 1.33761 1.33761 1.33761 1.33761 1.33684 1.33684 1.33681 1.33681 1.33681 1.33761 1.33761 1.33761 1.33681 1.33684 1.33681 1.33681 1.33761 1.33761 1.33761 1.33681 1.33684 1.33684 1.33681 1.33761 1.33761 1.33761 1.33681 1.33684 1.33684 1.33681 1.33761 1.33761 1.33761 1.33681 1.33684 1.33684 1.33681 1.33681 1.33761 1.33761 1.33761 1.33681 1.33684 1.33684 1.33681 1.33684 1.33681 1.33684 1.33681 1.33681 1.33684 1.33684 1.33681 1.33684 1.33681 1.33684 1.33681 1.33684 1.33					1.33955							
12.0												
14.0 1.23961 1.33951 1.33922 1.33894 1.3386.7 1.33841 1.33816 1.33791 1.33768 1.33745 1.33725 1.33264 1.33684 1.33684 1.33684 1.33684 1.33684 1.33684 1.33684 1.33684 1.33875 1.33725 1.33684 1.33885 1.33885 1.33885 1.33885 1.33885 1.33885 1.33725 1.33725 1.33725 1.33725 1.33725 1.33725 1.33725 1.33725 1.33725 1.33885 1.33885 1.33885 1.33885 1.33885 1.33725 1.33725 1.33725 1.33725 1.33725 1.33725 1.33885 1.33885 1.33885 1.33885 1.33885 1.33725 1.33725 1.33725 1.33725 1.33885												
16.0 1.33961 1.33932 1.33903 1.33076 1.33049 1.33023 1.33797 1.33772 1.33748 1.33725 1.33703 18.0 1.33942 1.33942 1.33883 1.33856 1.33829 1.33803 1.33777 1.33753 1.33728 1.33705 1.33602 1.33922 1.33892 1.33894 1.33864 1.33809 1.33783 1.33757 1.33753 1.33728 1.33708 1.33684 1.33												
18.0 1.33942 1.33912 1.33883 1.33856 1.33829 1.33803 1.33777 1.33753 1.33728 1.33705 1.33682 20.0 1.33922 1.33892 1.33864 1.33805 1.33809 1.33731 1.33757 1.33732 1.33708 1.33684 1.33682 22.0 1.33901 1.33871 1.33871 1.33684 1.33802 1.33708 1.33701 1.33687 1.33683 1.33842 1.33820 1.33705 1.33761 1.33731 1.33689 1.33665 1.33642 1.33620 1.33705 1.33739 1.33713 1.33689 1.33665 1.33642 1.33620 1.33713 1.33689 1.33689 1.33665 1.33642 1.33620 1.33713 1.33689 1.33689 1.33665 1.33642 1.33689 1.33689 1.33689 1.33680 1.33689 1.33689 1.33689 1.33689 1.33689 1.33689 1.33689 1.33680 1.33689												
20.0 1.33922 1.33892 1.33864 1.33896 1.33809 1.33733 1.33757 1.33732 1.33708 1.33684 1.33682 22.0 1.33901 1.33871 1.33842 1.33815 1.33768 1.33761 1.33761 1.33767 1.33663 1.33841 24.0 1.33878 1.33848 1.33820 1.33792 1.33763 1.33739 1.33713 1.33689 1.33685 1.336842 1.33870												
22.0 1.33901 1.33871 1.33842 1.33815 1.33788 1.33761 1.33736 1.33711 1.33687 1.33663 1.33644 24.0 1.33878 1.33848 1.33820 1.33792 1.33765 1.33739 1.33713 1.33689 1.33665 1.33642 1.33620												
24.0 1.33878 1.33848 1.33820 1.33792 1.33765 1.33739 1.33713 1.33689 1.33665 1.33642 1.33620												
	26.0	1.33855	1.33825	1.33794	1.33769	1.33742	1.33716	1.33690	1.33666	1.33642	1.33620	1.33598
												1.33574
30.0 1.33808 1.33778 1.33749 1.33721 1.33694 1.33667 1.33642 1.33617 1.33594 1.33571 1.33544	30.0	1.33808	1.33778	1.33749	1.33721	1.33694	1.33667	1.33642	1.33617	1.33594	1.33571	1.33549

us and designations of the contraction of the contr

Table A-4. (cont)

	(A)										
TEMP					WANTE DE						S = 37 %
°C	400.0	410.0	420.0	430.0	WAVELER 440.0	450.0	460.0	470.0	480.0	490.C	
0.0	1.35183	1.35090	1.35002	1.34920	1.34845	1.34774	1.34708	1.34646	1.34588	1.34534	
2.0	1.35173	1.35080	1.34992	1.34911	1.34836	1.34766	1.34700	1.34637	1.34560	1.34526	
4.0	1.35162	1.35069	1.34982	1.34900	1.34626	1.34756	1.34690	1.34428	1.34570	1.34514	
4.0	1.35150	1.35055	1.34970	1.34888	1.34814	1.34744	1.34678	1.34616	1.34558	1.34504	
	1.35137	1.35045	1.34957	1.34875	1.34801	1.34731	1.34665	1.34603	1.34545	1.34491	
10.0	1.35124	1.35031	1.34943	1.34861	1.34787	1.34717	1.34650	1.34588	1.34530	1.34476	
12.0 14.0	1.35106	1.35015	1.34927	134845	1.34770	1.34730	1.34634	1.34572	1.34514	1.34460	
	1.35491	1.34998	1.34910	1.34828	1.34753	1.34682	1.34616	1.34554	1.34497	1.34443	
16.0 18.0	1.35073	1.34980	1.34892	1,34810	1.34734	1.34663	1.34597	1.34535	1.34478	1.34424	
20.0	1.35053	1-34961	1.34873	1,34791	1.34715	1.34644	1.34577	1.34516	1.34459	1.34405	
22.0	1.35033	1.34940	1.34852	1.24770	1.34695	1.34624	1.34557	1.34495	1.34438	1.34384	
24.0	1.34788	1.34895		1.34749	1.34673	1.34602	1.34536	1.34474	1.34416	1.34363	
24.0	1.34964	1.34871	1.34807	1.34726	1.34651	1.34580	1.34513	1.34451	1.34394	1.34340	
28.0	1.34939	1.34846	1.34758	1.34676				1.34428	1.34370	1.34317	
30.0		1.34820			1.34602	1.34532	1.34466	1.34404	1.34346	1-34292	
30.0	1.5-715	1.54620	1.34732	1.34650	1.34576	1.34507	1.5 541	1.34379	1.34321	1.34267	
	500.0	510.0	520.0	530.0	540.0	550,0	560.0	570.0	500.0	590.0	
0.0	1.34482	1.34433	1.34387	1.34344	1.34303	1.34264	1.34225	1.34189	1.34155	1.34121	
2.0	1.34474	1.74425	1.34379	1.34325	1.34293	1.34255	1.34218	1.34182	1.34147	1.34114	
4.0	1.34464	1.54416	1.34369	1.34324	1.34282	1.34245	1.34209	1.34173	1.34138	1.34105	
6.0	1.34452	1.34404	1.34357	1.34313	1.342.2	1.34233	1.34196	1.34160	1.34126	1.34093	
8.0	1.34439	1.34,390	1.34344	1.34301	1.34260	1.34220	1.34102	1.34146	1.34114	1.34080	
10.0	1.34424	1.34375	1.34330	1.34236	1.34245	1.34206	1.34167	1.34131	1.34099	1.34045	
12.0	1.34408	1.34359	1.34313	1.34270	1.34229	1.34189	1.34151	1.34115	1.34082	1.34049	
14.0	1.34391	1.34341	1.34295	1.34251	1.34210	1.34171	1.34134	1.34096	1.34064	1.34031	
16.0	1.34372	1.34323	1.34276	1.34232	1.34191	1.34153	1.34116	1.34080	1.34046	1.34012	
18.0	1.34352	1.34303	1.34257	1.34213	1.34172	1.34134	1.34095	1.34060	1.34026	1.33993	
20.0	1.34332	1.34283	1.34237	1.34193	1.34153	1.34114	1.34076	1.34040	1.34004	1.33972	
22.0	1.34311	1.34262	1.34216	1.34172	1.34131	1.34092	1.34054	1.34018	1.33984	1.33950	
24.0	1.34288	1.34240	1.34194	1.34150	1.34109	1.34070	2.34032	1.33996	1.33962	1.33928	
26.0	1.34265	1.34217	1.34171	1.34127	1.34036	1 34047	1.34009	1.33972	1.33939	1.33905	
28.0	1.3-241	1.34193	1.34147	1.34103	1.3401?	1.34023	1.33985	1.33549	1.33915	1.33881	
30.0	1.34216	1.34167	1.34122	1.34078	1.34037	1.33998	1.33961	1.33925	1.33891	1.33457	
	600.0	610.0	620.0	630.0	640.0	456.0	660.0	670.0	680.0	690.0	700.0
0.0	1.34089	1.34059	1.34031	1.34003	1.33977	1.33950	1.33924	1.33900	1.33875	1.33852	1.33830
2.0	1.34083	1.34052	1.34.24	1,33996	1.33969	1.33942	1.33917	1.33892	1.33868	1.33845	1.33023
4.0	1.34073	1.34043	1.34014	1.33986	1.33959	1.33932	1.33907	1.33882	1.33459	1.33036	1.33814
6.0	1.34062	1.34031	1.34002	1.33974	1.33947	1.33921	1.33895	1.33671	1.33847	1.33825	1.33663
8.0	1.34049	1.34019	1.33990	1.33962	1.33934	1.33908	1.33882	1.33858	1.33834	1.33812	1.33790
10.0 12.0	1.34035	1.34004	1.33975	1.33947	1.33920	1.33893	1.33868	1.33843	1.33820	1.33797	1.33775
14.0	1.34018	1.33969	1.33959	1.33931	1.33903	1.33877	1.33852	1.33827	1.33804	1.33761	1.33759
14.0	1.33990	1.33950	1.33921	1.33894	1.33886	1.33841	1.33834	1.33810	1.33786	1.33764	1.33742
18.0	1.33961	1.33931	1.33902	1.33875	1.33848	1.33821	1.33796	1.33791	1.33767	1.33744	1.33721
20.0	1. 33940	1.33910	1.33882	1.33854	1.33827	1.33801	1.33775	1.33750	1.33747	1.33723	1.33701 1.33680
22.0	1.33919	1.33889	1.33860	1.33432	1.33806	1.33779	1.33753	1.33729	1.33726	1.33481	1.33659
24.0	1.33894	1.33866	1.33838	1.33810	1.33783	1.33757	1.33731	1.33707	1.33683	1.33660	1.33637
26.0	1.33873	1.33843	1.33814	1.33787	1.33760	1.33734	1.33708	1.33684	1.33660	1.33638	1.33616
28.0	1.33950	1.33820	1.33791	1.33763	1.33736	1.33710	1.33684	1.33660	1.33636	1.33614	1.33592
30.9	1-33826		1.33767	1.33739	1.33712	1.33665	1.33640	1.33635	1.33611	1.33589	1.33567

Table A-4. (cont)

					(0	)					
TEMP					WAVELEX	OTH ()					\$ = 36 %
°C	400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	7
0.0	1.35203	1.35110	1.35022	1,34940	1.34865	1.34795	1.34728	1.34665	1.34608	1-34554	
2.0	1.35193	1.35101	1.35013	34931	1.34854	1.34786	1.34720	1.34657	1.34600	1.34546	
4.0	1.35182	1.35039	1.35002	1.34920	1.34844	1.34776	1.34710	1.34647	1.34589	1.34536	
4.0	1.35170	1.35078	1.34790	1.34908	1.34834	1.34764	1.34698	1.34636	1.34578	1.34524	
.0	1.35157	1.35045	1.34977	1.34895	1.34821	1.34751	1.34685	1.34622	1.34564	1.34510	
10.0	1.35143	1.35050	1.349/2	1.34880	1.34806	1.34736	1.34670	1.34608	1.34550	1.34495	
12.6	1.35126	1.35035	1.34/44	1.34864	1.34790	1.34719.		1-34591	1.34534	1.34479	
14.0	1.35111· 1.35092	1.34999	1.34711	1.34847	1.34772	1.34701	1.34635	1.34573	1.34516	1.34462	
16.0 18.0	1.35073	1.34980	1.34892	1.34810	1.34753	1.34663	1.34416	1.34554	1.34497	1.34443	
20.0	1.35052	1.34959	1.34871	1.34789	1.34714	1.34643	1.34576	1.34514	1.34457	1.34424	
22.0	1.35030	1.34937	1.34850	1.34768	1.34692	1.34621	1.34554	1.34492	1.34435	1.34403	
24.0	1.35007	1.34914	1.34827	1.34745	1.34670	1.34599	1.34532	1.34470	1.34412	1.34351	
26.0	1.34983	1.34690	1.34802	1.34720	1.34646	1.34575	1.34509	1.34447	1.34389	1.34335	
28.0	1.34958	1.34845	1.34777	1.34695	1.34621	1.34551	1.34485	1.34422	1.34364	1.34311	
30.0	1.34932	1.34839	1.34751	1.34669	1.34595	1.34525	1.34459	1.34397	1.34339	1.34205	
	500.C	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.34502	1.34453	1.34407	1.34364	1.34323	1.34283	1.34245	1.34206	1.34174	1.34141	
2.0	1.34494	1.34445	1.34399	1.34355	1.34313	1.34274	1.34237	1.34201	1.34167	1.34133	
4.0	1.34484	1.34435	1.34388	1.34344	1.34302	1.34264	1.34228	1.34192	1.34157	1.34124	
6.0	1.34472	1.34423	1.34377	1.34333	1.34291	1.34252	1.34215	1.34179	1.34146	1.34112	
8.0	1.34458	1.34409	1.34363	1.34320	1.34279	1.34239	1.34201	1.34165	1.34133	1.34099	
10.0	1.34443	1.34394	1.34349	1.34305	1.34264	1.34225	1.34186	1.34150	1.34118	1.34084	
12.0	1.34427	1.34378	1.34332	1.34289	1.34247	1.34208	1.34170	1.34134	1.34101	1.34067	
14.0	1.34410	1.34360	1.34314	1.34270	1.34229	1.34190	1.34153	1.34117	1.34083	1.34050	
16.0	1.34391	1.34341	1.34295	1.34251	1.34210	1.34172	1-34134	1.34098	1.34044	1.34030	
18.0	1.34371	1.34322	1.34275	1.34232	1-34191	1.34153	1,34115	1.34079	1.34044	1.34011	
20.0	1.34351	1.34301	1.34255	1.34212	1.34171	1.34132	1.34095	1.34058	1.34024	1.33990	
22.0	1.34329	1.34280	1.34234	1.34191	1.34150	1.34111	1.34073	1.34036	1.34002	1.33969	
24.0	1.34307	1.34258	1.34212	1.34169	1.34127	1.34088	1.34050	1.34014	1.33980	1.33946	
26.0	1.34284	1.34236	1.34190	1.34146	1.34104	1.34065	1.34027	1.33991	1.33957	1.33923	
28.0 <b>30.</b> 0	1.34259 1.34234	1.34211	1,34140	1.34122	1.340 00	1.34041	1.34003	1.33947	1.33933	1.33900	
	600.0	410.0	420.0	630.0	640.0	<b>650.</b> 0	660.0	470.0	480.0	490.0	700.0
0.0	1.34110	1.34080	1.34051	1.34023	1.339%	1.33970	1.33944	1.33919	1.3.7695	1.33872	1.33049
2.0	1.34101	1.34071	1.34043	1.34015	1.33968	1.33962	1.33936	1.33911	1.33887	1-33644	1.33842
4.0	1.34092	1.34062	1.34033	1.34005	1.33978	1.33952	1.33926	1.33902	1.33678	1.33655	1.33433
4.0	1.34061	1.34051	1.34022	1.33994	1.33966	1.33940	1.33914	1.33890	1.33666	1.33044	1.33022
8.0	1.34068	1.34038	1.34009	1.33981	1.33953	1.33926	1.33901	1.33876	1.33653	1.33830	1.35309
10.0	1.34053	:.34023	1.33994	1.33944	1.33938	1.33912	1.33886	1.3366.	1.33836	1.33816	1.33794
12.0	1.34036	1.34006	1.33977	1.33949	1.33922	1.33895	1.33870	1.33846	1.33022	1.33799	1.33778
14.0	1.34018	1.33988	1.33959	1.33931	1.33904	1.33678	1.33053	1.33628	1.33605	1.33782	1.33760
14.0	1.33998	1.33968	1.33940	1.33912	1.33886	1,33859	1.33834	1.33809	1.33785	1.33762	1.33740
18.0	1.33979	1.33949	1.33920	1,33893	1.33866	1.33740	1.33814	1.33789	1.33765	1.33741	1.33719
20.0	1.33958	1.33928	1.33900	1.33872	1.33845	1.33619	1.33793	1,33768	1.33744	1.33720	1.33498
22.0	1.33937	1.33907	1.33678	1.3385	1.33824	1.33797	1.33771	1.33746	1.33722	1.33499	1.33676
24-0	1.33914	1.33864	1.33856	1.33828	1.33801	1.33775	1.33749	1.33724	1.33700	1.33677	1.33455
26.0	1.33011	1.33661	1.33832	1.33805	1.33778	1.33752	1.33726	1.33702	1.3367#	1.33655	1.33634
28.0	1.33848	1.33837	1.33809	1.33781	1.33754	1.33728	1.33702	1.33670	1.33654	1.33432	1.33610
30.0	1+33443	1035213	4,33184	1433131	1.33127	1.33103	1.330//	1033033	1.33027	100000	1.33565

indicated and the second of th

## Table: A-4: (cont)

					(p	),					S = 30 %
TEMP					VAVEL EN	iotie (m)					
°C	460.0	×:410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	•
	1.35224	1.35131	1.35043	1.34961	1.34806	1.34015	1.34748	1.34686	1.34628	1.34574	
2.0	1.35214	1.35121	1,35033	1.34951	1.34876	1.34806	1.34739	1.34677	1.34619	1:34546	
4.0	1.35202	.1.35110	1.35022	1.34940	1.3486	1.34794	1.34729	1.34667	1.34609	1.34555	
4.0	1.35190	1.35098	1.35010	1.34928	1.34854	1.34784	1.34717	1.34455	1.34597	1.34543	
8.0	1.35177	1:35085	1.34957	1.34915	1.34040	1.34770	1:34704	1.34642	1.34584	1-34530	
10.0	1.35163	1.35070	1,34902	1.34900	1'.34825	1.34755	1.34689	1.34627	1.34549	1.34515	
12.0	1,35146	1:35054	1.34766	1534004	1.34809	1.34738	1.34672	1.34610	1.34553	1.34498	
14.0	1.35131	1:35037	1.34949	1.34866	1.54791	1.34720	1.34654	1.34592	1.34535	1.34461	
16.0	1.35112	1.35019	1.34930	1.34848	1.34772	1.34702	1.34635	1.34573	1.34514	1.34462	
18.0	1.35092	1.34999	1.34911	1.34029	1.34753	1.34682	1.34415	1.34554	1.34497	1.34442	
20.0	1.35071	1,34979	1.34891	1.34809	1.34733	1.34662	1.34595	1.34533	1.34476	1.34422	
22.0	1.35049	1.34957	1.34849	1:-34787	1.34711	1.34640	1.34573	1.34517	1.34454	1.34400	
24.0	1.35027	1:34934	1.34844	1.34764	1.34468	1.34618	1.34551	1.34489	1.34431	1.34377	
26.0	1.35003	1.34910	1.34821	1.34739	1.34665	1.34594	1.34528	1.34445	1.34407	1.34354	
28.0	1.34977	1.34084	1.34796	1.34714	1.34640	1.34569	1.34503	1.34441	1.34303	1.34329	
30.0	1.34951	1.34858	1.34770	1.34688	1.34614	1.34544	1.34476	1.34416	1.34358	1.34304	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	500.0	590.0	
0.0	1.34522	1.34473	1.34427	1.34384	1.34342	1.34303	1.34265	1.34228	1.34194	1.34161	
2.0	1.34514	1.34465	1.34418	1.34374	1.34333	1.34294	1.34257	1.34221	1.34186	1.34153	
4.0	1.34504	1.34455	1.34408	1.34363	1.34322	1.34203	1.34247	1.34211	1.34177	1.34143	
4.0	1.34491	1.34443	1.34396	1.34352	1.34310	1.34271	1.34234	1.34198	1.34165	1.34132	
1.0	1.34478	1.34429	1.34363	1.34339	1.34298	1.34258	1.34220	1.34184	1-34152	1.34118	
10.0	1.34462	1.34413	1.34366	1.34324	1.34283	1.34243	1.34205	1.34169	1.34136	1.34103	
12.0	1.34446	1.34397	1.34351	1.34307	1.34266	1.34227	1.34188	1.34152	1.34120	1.34086	
14.0	1.34429	1.34379	1.34333	1.34289	1.34246	1.34209	1.34171	1.34135	1.34102	1.34068	
16.0	1.34410	1.34360	1.34314	1.34270		1.34190	1.34153	1.34117	1.34083	1.34049	
18.0	1.34390	1.34340	1.34294	1.34250		1.34171	1.34134	1.34097	1.34063	1.34029	
20.0	1.34369	1.34320	1.34274	1.34230		1.34151	1.34113	1.34074	1.34042	1.34009	
22.0	1.34348	1.34299	1.34253	1.34209	1.34166	1.34129	1.34091	1.34055	1.34020	1.33987	
24.0	1.34325	1.34277	1.34231	1.34167		1.34104	1.34048	1.34032	1.33998	1.33964	
	1.34302	1.34254	1.34208	1.34164		1.34083	1.34045	1.34009	1.33975	1.33941	
26.0 28.0	1.34278	1.34230	1.34184	1.34140		1.34059	1.34022	1.33765	1.33951	1.33918	
30.0	1.34252	1.34204		1.34114		1.34035	1.33990	1.23961	1.33927	1.33694	
	600.0	610.0	620.0	630.0	640.0	650.0	440.0	670.0	480.0	690.0	700.0
0.0	1.34129	1.34099	1.34070	1.34043		1.33/09	1.33964	1.33939		1.33091	1.33869
2.0	1.34121	1.34091		1.34035		1.33981	1.33955	1.33931	1.33907	1.33004	1.33062
4.0	1.34111	1.34041	1.34052	1-34024			1.33945	1.33921	1.33097	1.33874	1.33852
4.0	1.34100			1.34013			1.33933	1.33909			1.33041
8.0	1.34067	1.34057		1.34000			1.33920	1.33895			1.33628
10.0	1.34072	1.34042		1.33985		1.33931	1.33905		1.33657	1.33634	1.33013
12.0	1.34055	1.34025					1.33069	1.33064		1.33818	1.33796
14.0	1.34037	1.34007		1.33950		1.33897	1.33871	1.33847			1.33779
14.0	1.34017	1.33987					1.33852				1.33758
10.0	1.33998			1.33911		1.33050	1.33032				1.33737
20.0	1.33977	1.33947					1.33011				1.33716
22.0	1,3955				1.33842						1.33694
24.0	1.33932	1.33902	1.33874				1.33767				1.33473
26.0	1.33909										1.33451
28.0	1.33066										1.33628
30-0			1.33803	1.33775	1.33747	1.33721	1.33495	1.33671	1.33647	1.33424	1.33402

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)					S = 40 %
CTR (ma)					<del></del>
450.0	440.0	470.0	486.0	490.0	` •
1.34035	1.34768	1.34706	1.34448	1.345.94	
1.34826	1.34760	1.34697	1.34639	-1-34585	
1.34816	1.34749	1.34687	1.34629	1.34575	
1.34790	1.34724	1.34661	1.34603	1.34549	
1.34775	1.34706	1.34646	1.34588	1.34534	
1.34758	1.34691	1.34629	1.34572	1.34517	
1.34740	1.34673	1.34611	1.34554	1.34500	
1.34721	1.34654	1.34592	1.34535	1.34481	
1.34701	1.34634	1.34572	1-34516	1.34461	
1.34481	1.34614	1.34552	1.34495	1.34440	
1.34459	1.34592	1.34530	1.34473	1.34416	
1.34636	1.34570	1.34507	1.34450	*-34396	
1.34613	1.34544	.1.34684	1.34426	1.34372	
1.34586	1.34522	1.34459	1.34401	1.34347	
1.34562	1.34496	1.34434	1.34376	1.34322	
550.0	540.0	570.0	580.0	590.0	
1.34323	1.34284	1.34247	1.34214	1.34180	
1.34314	1.34276	1.34240	1.34206	1.34172	
1.34303	1.34267	1.34231	1.34196	1.34163	
1.34291	1.34253	1.34218	1.34184	1.34151	
1.34277	1.34239	1.34203	1.34171	1.34137	
1.34262	1.34207	1.34171	1.34155 1.34138	1.34122	
1.34227	1-34190	1.34154	1.34120	1.34067	
1.34209	1.34171	1.34135	1.34101	1.34067	
1.34189	1.34152	1.34114	1.34081	1.34048	
1.34169	1.34131	1.34095	1-34060	1.34027	
1.34147	1.34109	1.34073	1-34038	1.34665	
1.34125	1.34087	1.34050	1.34014	1.33982	
1.34101	1.34063	1.34027	:-33993	1.33959	
1.34077	1.34039	1.34003	1.33949	1.33936	
1.34053	1.34015	1.33979	1.33945	1.33912	
650.0	460.0	670.0	480.0	490.0	700-0
1.34009	1.33983	1.33958	1.33934	1.33911	1.33666
1.33990	1.33965	1.33940	1.33926	1.33493	1.33881 1.33871
1.33978	1.33952	1.33926	1.33904	1.33062	1.33860
1.33964	1.33939	1.33914	1-33691	1.33648	1.93846
1.33949	1.33924	1.33899	1.33876	1.33853	1.33831
1.33933	1.33907	1.33883	1.33859	1.33837	1.33815
1.33915	1.33809	1.33065	1.33041	1.33819	1.33797
1.33894	1.33870	1.33844	1.33621	1.33798	1.33776
1.33874	1.33850	1.33625	1.33801	1.33777	1.33755
1.33855	1.33829	1.33804	1.33780	1.33756	1.33734
1.33833	1.33808	1.33783	1.33758	1.33735	1.33712
1.33811	1.33705	1.33740	1.33736	1.33713	1.33491
1.33763	1.33738	1.33737	1.33690	1.33667	1.33645

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Table A-4. (cont)

					(•	)					<b>8 = 41%</b>
THE		-			WAVELED	OTH (m)					
°C	400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	400.0	490.0	•
0.0	1.35265	1.35172	1.35084	1.35001	1.34926	1.34055	1.34789	1.34726	1.34668	1.34614	
7.0	1.35255	1.35162	1.35074	1.34992	1.34917	1.34846	1.34780	1.34717	1.34459	1.34605	
4.0	1.35243	1.35150	1.35042	1.34980	1.34906	1.34835	1.34769	1.34707	1.34449	1.34595	
6.0	1.35230	1.35138	1.35050	1.34968	1.34893	1.34823	1.34757	2.34694	1.34436	1.34582	
8.0	1.35217	1.35124	1.35034	1.34954	1.3480	1.34810	1.34743	1.34481	1.34623	1.34548	
10.0	1.35203	1.35110	1.35021	1.34739	1.34865	1.34794	1.34728	34444	1.34608	1.34553	
12.0	1.35187	1,35094	1.35005	1.34923	1.34848	1.34777	1.34711	1.34449	1.34591	1.34534	
14.0	1.35170	1.35076	1.34967	1.34905	1.34830	1.34759	1.34492	1.34430	1.34573	1.34519	
16.0	1.35151	1.35057	1.34969	1.34007	1.34811	1.34740	1.34673	1.34411	1.34554	1.34500	
18.0	1.35131	1.35038	1.34950	1.34867	1.34791	1.34720	1.34453	1.34591	1.34534	1.34440	
20.0	1.35110	1.35017	1.34929	1.34847	1.34771	1-34700	1.34632	1.34571	1.34513	1.34459	
22.0	1.35000	1.34995	1.34907	1.34825	1.3-749	1.34676	1.34611	1.34549	1.34491	1.34437	
24.0	1.35045	1.34972	2.34884	1.34801	1.34725	1.34655	1.34564	1.34526	1.34468	1.34414	
26.0	1.35041	1.34948	1.34859	1.34777	1.34702	1.34632	1.34545	1.34502	1.34444	1.34390	
28.0	1.35014	1.34922	1.34834	1.34752	1.34677	2.34607	1.34540	1.34478	1.34420	1.34344	
30.0	1.34989	1,34896	1.34807	1.34725	1.34651	1.34361	1.34515	1.34453	1.34395	1.34340	
	500.0	510.0	520.0	530.0	540.0	550.0	540.0	570.0	500.0	590.0	
0.0	1.34542	1.34513	1.34467	1.34423	1.34362	1.34343	1,34305	1.34268	1.34233	1.34200	
2.0	1.34553	1.34505	1.3445.	1.34414	1.34377	1.34333	1.34294	1.34260	1.34225	1.34192	
4.0	1.34543	1.34494	1.34447	1.34402	1.34340	1.34322	1.34286	1.34250	1.34215	1.34102	
6.0	1.34530	1.34481	1.34435	1.34341	1.34349	1.34310	1.34272	1.34237	1.34203	1.34170	
8.0	1.34516	1.34467	1.34421	1.34378	1.34336	1.34296	1.34258	1.34222	1.34190	1.34157	
10.0	1.34501	1.34451	1.34406	1.34363	1.34321	1.34281	1.34243	1.34207	1.34174	1.34141	
12.0	1.34484	1.34435	1.34389	1.34345	1.34304	1.34264	1.34226	1.34190	1.34157	1.34124	
14.0	1.34466	1.34417	1.34370	1.34327	1.34285	1.34244	1.34208	1.34172	1.34139	1.34105	
16.0	1.34447	1.34398	1.34351	1.34307	1.34266	1.34227	1.34190	1.34154	1.34120	1.34064	
19.0	1.34427	1.34378	1.34331	1.34288	1.34247	1.34208	1.34176	1.34134	1.34100	1.34044	
.20.0	1.34406	1.34357	1.34311	1.34267	1.34226	1.34188	1.34149	1.34113	1.34079	1.34045	
22.0	1.34385	1.34336	1.34290	1.34246	1.34205	1.34144	1.34127	1.34091	1.34057	1.34023	
24.0	1.34342	1.34314	1.34268	1.34224	1.34182	1.34143	1.34105	1.34068	1.34034	1.34000	
26.0	1.34339	1.34291	1.34245	1.34201	1.34159	1.34119	1.34081	1.34045	1.34011	1.33977	
28.0	1.34315	1.34266	1.34220	1.34176	1.34135	1.34095	1.34058	1.34021	1.33907	1.33954	
30.0	1.34289	1.34241	1.34195	1.34151	1.34110	1.34071	1.34033	1.33997	1.33963	1.33929	
	400.0	410.0	420.0	630.C	640.0	450.0	660.0	470.0	<b>680.</b> 0	690.0	700.0
0.0	1.34168	1.34138	1.34110	1.34062	1.34055	1.34029	1.34003	1.33978	1.33954	1.33930	1.33908
2.0	1.34160	1.34130	1.34101	1.34073	1.34046	1.34020	1.33994	1.33949	1.33945	1.33922	1.33900
4.0	1.34150	1.34120	1.34091	1.34043	1.34036	1.34009	1.33964	1.33959	1.33935	1.33913	1.33491
6.0	1.34138	1.34108	1.34079	1.34051	1.34024	1.33997	1.33972	1.33947	1.33923	1.33901	1.33479
8.0	1.34126	1.34095	1.34046	1.34638	1.34010	1.33903	1.33958	1.33933	1.33910	1.33067	1.33045
10.0	1.34110	1.34080	1.34051	1.34022	1.33995	1.33968	1.33943	1.33916	1.33694	1.33672	1.33050
12.0	1.34093	1.34043	1.34033	1.34005	1.33978	1.33951	1.33926	1.33901	1.33676	1.33855	1.33834
14.0	1.34074	1.34044	1.34015	1.33987	1.33940	1.33933	1.33908	1.33683	1.33040	1.33637	1.33915
16.0	1.34054	1.34023	1.33995	1.33947	1.33%1	1.33914	1.33009	1.33844	1.33840	1.33617	1.33794
18.0	1.34034	1.34004	1.33975	1.33946	1.33921	1.33894	1.33068	1.33843	1.33619	1.33794	1.33773
20.0	1.34013	1.33983	1.33954	1.33927	1.33900	1.33073	1.33847	1.33822	1.33798	1.23774	1.33751
22.0	1.33991	1.33961	1.33933	1.33905	1.33676	1.33651	1.33824	1.33401	1.33774	1.33753	1.33730
24.0	1.33969	1.33939	1.33910	1.33002	1.33855	1.33029	1.33003	1.33778	1.33754	1.33731	1.33709
26.0	1.33945	1.33915	1.33867	1.33857	1.33832	1.33805	1.33780	1.33755	1.33732	1.33709	1.33687
28.0	1.33922	1.33691	1.33642	1.33435	1.33808	1.33761	1.33756	1.33731	1.33706	1.33665	1.33663
30.0	1-33897	1.33867	1.33830	1.33810	1.33783	1.33756	1.33731	1.33706	1.33602	1.33659	1.33438

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S = 42%

										• ~
				MAYELE						
400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	
1.35204	1.35193	1.35105	1.35072	1.34947	1.34875	1.34808	1.34746	1.34688	1.34634	
1.35275	1.35182	1.35094	1.35012	1.34937	1.34866	1.34800	1.34737	1.34679	1.34425	
1.35243	1.35170	1.35002	1.35000	1.34926	1.34055	1.34789	1.34726	1.34648	1.34614	
1.25250	1.35158	1.35070	1.34968	1.34913	1.34843	1.34776	1.34714	1.34454	1.34402	
1.35237		1.35054	1.34974	1.34899	1.34829	1.34763	1.34700	1.34642	1.34500	
1.35223	1.35130	1.35041	1.34959	1.34864	1.34814	1.34747	1.34685	1.34627	1-3-572	
		1.35025	1.34942	1.34867	1.34797	1.34730	1.34668	1.34610	1-34556	
1.35190	1-35096	1.35007	1.34924	1.34849	1.34778	1.34711	1-34649	1.34592	1-34538	
	1.39077	1.34700	1.34906	1.34830	1.34759	1.34692	1.34430	1.34573	1.34519	
1.35156	1.35057	1.34769	1.34886	1.34811	1.34739	1.34672	1.34610	1.34553	1.34499	
1.35129	1.35034	1.34948	1.34866	1.34790	1.34718	1.34651	1.34509	1.34532	1.34478	
1.35107	1.35014	1.34726	1.34844	1.34768	1.34697	1.34630	1.34567	1.34510	1.34456	
1.35084	1.34991	1.34903	1.34821	1.34745	1.34674	1.34607	1.34544	1.34487	1.34433	
1.35040	1-34947	1.34078	1.34796	1.34721	1-34650	1.34584	1-34521	1-34463	1.34409	
1.35035	1.34941	1-74853	1.34770	1.346%	1.34626	1.34559	1.34496	1.34438	1.34304	
1.35009	1.34915		1.34744	1.34670	1.34600	1.34534	1.34471	1.34417		
								•		
500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
1.34582	1.34533	1.34487	1.34444	1.34402	1.34343	1.34324	1.34287	1.34253	1.34220	
1.34573	1-34524	1.34478	1.34433	1.34392	1.34353	1.34316	1-34280	1.34245	1.34211	
1.34563	1.34514	1.34444	1.34422	1.34300	1.34342	1.34306	1.34270	1.34235	1-34201	
1.34550	1.34501	1.34454	1.34410	1.34348	1.34329	1.34292	1.34254	1.34223	1-34189	
1.34535	1.34466	1.34440	1.34397	1.34355	1.34316	1.34277	1.34241	1-34209	1-34175	
1.34520	1.34471	1.34425	1.34382	1.34340	1.34301	1.34262	1.34224	1.34193	1.34140	
1.34503	1.34454	1.34408	1.34364	1.34323	1.34283	1.34245	1.34209	1.34176	1.34142	
1.34405	1.34436	1.34369	1.34346	1.34304	1.34265	1.34227	1.34191	1-34157	1.34124	
1.34466	1.34416	1.34370	1.34324	1.34285	1.34246	1.34208	1.34172	1.34130	1.34104	
1.34446	1.34394	1.34350	1.34306	1.34265	1.34224	1.34189	1.34152		1.34064	
1.34425		1.34329	1.34284	1.34245	1.34204	1.34168	1.34131	1.34097	1.34063	
1.34403	1.34354	1.34308	1.34265	1.34223	1.34184	1.34146	1-34109	1-34075	1.34041	
1.34301	1.34332	1.34266	1.34242	1.34201	1.34161	1.34175	1.34086	1-34052	1.34019	
1.34358	1.34309	1.34243	1.34219	1.34177	1.34138	1.3/199	1.34043	1.34029	3- 7399A	
1.34333	1.34285	1.34239	1.34195	1.34153	1.34114	1.34076	1.34039	1.34005	1 ,4972	
1.34307	1.34259	1.34213	1.34169	1.34128	1.34089	1.34052	1.34015	1.33961	33947	
600.0	410.0	620.0	630.0	640.0	550.0	440.0	470.0	6%0.0	690.0	700,
1.34188	1.34158	1.34129	1.34102	1.34075	1.34048	34023	1.33998	1.33973	1.33950	1.339
1.34179	1.34149	1.34121	1.34093	1.3406+	1.34039	1.34014	1.33969	1.33945	1.33942	1.339
1.3-170	1.34139	1.34110	1.34082	1.34055	1.34029	1.34003	1.33978	1.33955	1.33932	1.33
1.34157	1.34127	1,34098	1.34070	1.34(43	1.34016	1.33991	1.33966	1-33942	1.33920	1.33
1.34144	1.34114	1.34085	1.34057	1.34029	1.34002	1.33977	1.33952	1.33929	1.33904	1.33
1.34129	1.34099	1.34070	1.34041	7.34(14	1.33967	1.33961	1.33937	1.33913	1.33891	1.33
1.34111	1.34061	1.34052	1.34024	1.33996	1.33970	1.33945	1.33920	1.33496	1,33074	1.33
1.34792	1-34042	1.34033	1.34005	1.33978	1.33952	1.33926	1.33902	1.33678	1.33855	1.33
1.34072	1.34042	1.34013	1.33986	1.33959	1.33933	1.33907	1.33802	1.33058	1.33435	1.330
1.34052	1-34022	1.33994	1.33944	1.33759	1.33913	1.33007	1.33842	1-33037	1-33814	1.23
1.34032	1.34002	1.33973	1.33945	1.33910	1.33892	1.33866	1.33840	1.3 3614	1.33792	1.33
1.34010	1.33780	1.33951	1.33923	1.33896	1.33849	1.33844	1.33619	1.33794	1.33771	1.33
1.33967	1.33957	1.33928	1.33900	1.33873	1.33047	1.33021	1.33796	1.33772	1.33749	1.33
	1.33934	1.33905			1.33423	1.33796	1.33773	1.33749	1.33727	1.33
1.33764										
1.33944	1.33910	1.33801	1.33053	1.33826	1.33799	1.33774	1.33749	1.33725	1.33702	1.334

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S	=	43	%_

TXMP			·		WAVEL EN	GTSI (mm)					
· oc	400.0	410.0	420.0	430.0	440.0	450.0	460.0	470.0	480.0	490.0	'
							1 1/010		1 24 700	. 94484	
0.0	1.35307	1.35213	1.35125	1.3504?	1.34967	1.34896	1.34829	1.34766	1.34708	1.34654	
2.0	1.35295	1.35202	1.35114	1.35032	1.34557	1.34886	1.3487.0	1.34757	1.34699	1.34645	
4.0	1.35283	1.35190	1.35102	1.35020	1.34933	1.34863	1.3-79	1.34734	1.34676	1.34621	
6.0	1.35270	1.35178	1.35089	1.34904	1.34919	1.34849	1.34782	1.34720	1.34662	1.34607	
8-0	1.35257	1.35164	1.35076	1.34978	1.34904	1.34833	1.34767	1.34704	1.34646	1.34591	
10.0 12.0	1.35227	1.35133	1.35044	1.34962	1.34886	1.34816	1.34749	1.34687	1.34629	1.34575	
14.0	1.35209	1.35115	1.35026	1.34944	1.34068	1.34797	1.34730	1.34669	1.34611	1.34557	
16.0	1.35190	1.35096	1.35008	1.34925	1.34849	1.34778	1.3.711	1.34649	1.34592	1.34538	
18,0	1.35170	1.35077	1.34988	1.34906	1.34830	1.34758	1.3.691	1.34629	1.34572	1.34518	
20.0	1.35149	1.35056	1.34968	1.34885	1.34809	1.34737	1.3.670	1.34608	1.34551	1.34496	
22.0	1.35126	1.35034	1.34945	1.34863	1.34767	1.34716	1.3-648	1.34586	1.34529	1.34474	
24.0	1.35103	1.35010	1.34922	1.34840	1.34764	1.34693	1.31 626	1.34563	1.34505	1.34451	
26.0	1.35079	1.34986	1.34897	1.34815	1.34740	1.34669	1.34602	1.34539	1.34481	1.34427	
28.0	1.35054	1.34960	1.34872	34789	1.34715	1.34644	1.34578	1.34515	1.34457	1.34403	
30.0	1.35028	1.34934	1.34845	1.34763	1.34688	1.34618	1.34152	1.34490	1.34432	1.34377	
	500.0	510.0	520.0	530.0	540.0	550.0	560.0	570.0	580.0	590.0	
0.0	1.34602	1.34553	1.34507	1.34464	1.34422	1.34382	1.24344	1.34307	1.34273	1.34239	
2.0	1.34593	1.34544	1.34497	1.34453	1.34411	1.34373	1.34336	1.34290	1.34254	1.34221	
4.0	1.34582	1.34533	1.34474	1.344.29	1.34387	1.34349	1.34311	1.34275	1.34242	1.34208	
6.0 8.0	1.34569	1.34506	1.34460	1.34416	1.34375	1.34335	1.34297	1.34260	1.34228	1.34194	
10.0	1.34539	1.34490	1.34444	1.34401	1.34359	1.34319	1.34281	1.34245	1.34212	1.34174	
12.0	1.34522	1.34473	1.34427	1.34363	1.34342	1.34302	1.34264	1.34227	1.34195	1.34161	
14.0	1.34504	1.34455	1.34408	1.34364	1.34323	1.34284	1.34246	1.34210	1.34176	1.34142	
16.0	1.34485	1.34435	1.34388	1.34344	1.34303	1.34264	1.34227	1.34191	1.34157	1.34123	
18.0	1.34465	1.34415	1.34306	1.34325	1.34284	1.34245	1.34207	1.34171	1.34136	1.34163	
20.0	1.344-4	1.34394	1.34348	1.34304	1.34263	1.34224	1.34186	1.34149	1.34115	1.34082	
22.0	1.34422	1.34373	1.34327	1.34283	1.34242	1.34202	1.34164	1.34127	1.34093	1-34059	
24.0	1.34399	1.34351	1.34305	1.34261	1.34219	1.34179	1.34141	1.34105	1.34071	1.34037	
26.0	1.34376	1.34327	1.34281	1.34237	1.34195	1.34156	1.34118	1.34081	1.34047	1.34013	
28.0	1.34351	1.34303	1.34257	1.34213	1.34171	1.34132	1.34094	1.34057	1.34024	1.33990	
30.0	1.34326	1.34277	1.34231	1.34188	1.34146	1.34107	1.34070	1.34033	1.33999	1.33966	
	600.0	610.0	620.0	630.0	640.0	650.0	660.C	670.0	0.086	690.0	700.0
0.0	1.34208	1.34178	1.34149	1.34121	1.34094	1.34068	1.34042	1.34017	1.33993	1.33969	1.33947
2.0	1.34199	1.34169	1.34140	1.34112	1.34085	1.34059	1.34033	1.34008	1.33984	1.33961	1.33939
4.0	1.34189	1.34159	1.34130	1.34102	1.34075	1.34040	1.34022	1.33998	1.33974	1.33951	1.33929
6.0	1.34176	1.34146	1.34117	1.34089	1.34062	1.34035	1.34010	1.33985	1.33961	1.33939	1.33917
8.0	1.34163	1.34133	1.34104	1.34075	1.34648	1-34921	1.33996	1.33971	1.33947	1.33925	1.33903
10.0	1.34148	1.34118	1.34088	1.34060	1.34032	1.34006	1.33980	1.33955	1.33932	1.33909	1.33887
12.0	1.34130	1.34100	1.34071	1.34042	1.34015	1.33988	1.33963	1.33920	1.33896	1.33874	1.33652
14.0	1.34111	1.34081	1.34052	1.34024	1.33977	1.33951	1.33925	1.33900	1.33876	1.33853	1.33831
16.0 18.0	1.34071	1.34041	1.34012	1.33984	1.33957	1.33931	1.33905	1.33880	1.33855	1.33832	1.33809
20.0	1.34050	1.34020	1.33991	1.33963	1.33936	1.33910	1.33884	1.33858	1.33834	1.33810	1.33787
22.0	1.34023	1.33998	1.33969	1.33941	1.33914	1.33867	1.33862	1.33836	1.33812	1.33789	1.33766
24.0	1.34005	1.33975	1.33946	1.33918	1.33891	1.33865	1.33839	1.33814	1.33790	1.33767	1.33745
26.0	1.33982	1.33951	1.33922	1.33895	1.33868	1.23841	1.33816	1.33791	1.33767	1.33744	1.33722
28.0	1.33958	1.33927	1.33899	1.33871	1.33843	1.33817	1.33791	1.33767	1-33743	1.33720	1.33698
30.0	1.33933		1.23874	1.33846	1.33819	1.33792	1.33766	1.33741	1.33710	1.33695	1.33673

## TABLE A-5 (a,b)

High Pressures S = 35% only

This table is based on the data of Stanley (1971). A detailed description of their modification is given in Subsection 4.3. The resulting table, shown in Table 4-7 in the text, replaces the original data and includes the following values of the variables:

Wavelength: 457.9. 488.0, 514.5, 632.8 nm

Pressure: 0, 352, 703, 1055 kg/cm<sup>2</sup>(gage)

Temperature: 0.03, 15.02, 29.98°C

Note: The following values of the variables were excluded  $\lambda = 501.7 \text{ nm}$  and  $p = 1406 \text{ kg/cm}^2 \text{ gage}$ 

Tables A-5(a,b) represent the increment of index with ressure, and are sequentially additive to Tables A-1 through A-4 giving the pressure, temperature, and wavelength dependence of the index of refraction (with respect to air) of Copenhagen Standard Seawater of 35% salinity. They are accurate to within  $\pm 6 \times 10^{-5}$ .

Table A-5(a): holds for any wavelength (it is exact only for 530 nm, see Figure 4-7 in Subsection 4.3) providing an additive index increment for various values of pressure and temperature.

Table A-5(b): holds for any temperature and gives additive increments for values of wavelength and pressure to provide wavelength corrections to Table A-5(a).

To use these tables, first read Tables A-1, A-2, A-3, or A-4( $\ell$ ) for the desired wavelength and temperature (at atmospheric pressure) for S = 35%, then, add the appropriate factor given in Table A-5(a), and then add the factor in Table A-5(b).

The pressures have been chosen every 50 kg/cm² between 0 and 1100 kg/cm² (gage). The temperatures are every 2°C between 0 and 30°C. The wavelengths are equispaced every 10 nm between 400 and 700 nm.

Table A-5. INDET OF REFRACTION OF SEAWATER
Index Increments due to Pressure — Salinity = 35%

Tables (a) and (b) are not independent. They are both additive to the atmospheric pressure index values.

(a) Index increase with pressure and temperature, applicable at all wavelengths.

										Al	Wave	engths
TEMP	0.0	50.0	100.0	150.0	200.0	250.0	(kg/cm²) 300.0	3 .^	400.0	450.0	500.0	550.0
0.0	0.00000	0.00077	0.00154	0.00230	0.00305	0.00379	0.00452	0.00525	0.00597	0.00649	0.00739	0.00809
2.0	0.00000	0.00077	0.00152	0.00227	0.00301	0.00375	0.00448	0.00520	0.00591	0.00462	0.00732	0.00601
4.0	0.00000	0.00074	0.00151	0.00225	0.00298	0.00371	0.00443	0.00515	0.00585	0.00655	0.00725	0.00793
4.0	0.00000	0.00075	0.00149	0.00223	0.00794	0 50368	0.00439	0.00510	0.00590	0.00649	0.00718	0.00784
8.0	0.90000	0.00074	0.00148	0.00221	0.00293	1.00:04	0.00435	0.00505	0.00575	0.00643	0.00712	0.00779
10.0	0.0000	0.00074	0.00147	0.00219	0.00290	7.00361	0.00431	0.00501	0.00570	0.00633	0.00704	0.00772
12.0	0.00000	0.00013	0.00145	0.60217	0.00288	U.00358	0.00428	0.00497	0.00545	0.00433	0.00700	0.00766
14.0	0.90000	(+00073	0.00144	0.00215	0.00286	0.00355	0.00425	0.00493	0.00561	0.00428	0-00495	0.00761
16.0	0.00000	0.00072	0.00143	0.00214	0.00284	0.00353	0.00422	0.00490	0.00557	0.00624	0.00490	0.00755
18.0	0.00000	0.60072	0.00142	0.00212	0.00282	0.00351	0.06-19	0.00484	0.005>3	0.00420	0.00686	0.00751
20.0	0.00000	0.00071	0.00141	0.00211	0.00280	0.00349	0.00416	0.00484	0.00550	J.00616	0.00482	0.00746
22.0	9.00000	0.00071	0.00141	0.00210	0.00275	0.00347	0.00414	0.00481	0.00547	0.00613	0.00678	0.00/42
24.0	0.00000	0.00070	0.00140	0.00209	0.00277	0.00345	0.00412	0.00479	0.00545	0.00610	0-00675	0.00739
26.0	0.00000	0.00070	0.00139	0.00208	C.00274	0.00343	0.00410	0.00477	0.00542	0.00607	0.00672	0.00734
29.0	0.00000	0.00070	0.00139	0.00207	0.00275	0.00342	0.00409	0.00475	0.00540	0.00605	0.00470	0.00733
30.0	0.00000	0.00069	0.00138	0.00206	0.00274	0.00341	0.00407	0.90473	0.00539	0.00603	0,00667	0.00731
	600.0	650.0	700.0	150.0	400.0	850.0	900.0	950.0	1000.0	1050.0	1100.0	
0.0	0.00879	0.00947	0.0'015	0.01082	0.01148	0.01214	0.01278	0.01343	0.01406	0.01468	0.01530	
2.0	0.00870	0.00937	0.01005	0.01071	0.01137	0.01202	0.01266	0.01329	0.01392	0.01454	0.01516	
4.0	0.00861	0.00928	0.00995	0.01061	0.01126	0.01190	0.01254	0.01317	0.01379	0.01441	0.01501	
6.0	0.00853	0.20920	0.00986	0.01051	0.01116	0.01179	0.01243	0.01305	0.01367	0.01428	0.01488	
8.3	0.60946	0.00912	0.00977	0.01042	0.01106	0.01169	0.01232	0.01294	0.01355	0.01416	0.01476	
10.0	0.00839	2-00904	0.00949	0.01033	0.01097	0.01160	0.01222	0.01283	0.01344	0.01405	0.01464	
12.0	0.00#32	0.00897	0.00962	0.01025	0.010#8	0.01151	0.01213	0.01274	0.01334	0.01394	0.01453	
14.0	0.00826	0.00891	0.00955	0.01018	0.01081	0.01143	0.01204	0.01265	0.01325	0.01384	0.01443	
16.0	0.00820	0.00885	0.00748	0.01011	0.01072	0.01135	0.01196	0.01257	0.01316	0.01375	0.01434	
18.0	0.00815	0.00479	0.00942	0.01005	0.01067	0.0112#	0.01189	0.01249	0.01308	0.01367	0.01425	
20.2	0.00610	0.00874	0.00937	0.00999	0.01061	0.01122	0.01182	0.01242	0.01301	0.01360	0.01418	
22.0	0.00000	0.00849	0.00932	0.00994	0.01055	0.01116	0.01176	0.01236	0.01295	0.01353	0.01411	
24.0	C.60#02	3.00#45	0.00926	0.00990	0.01051	0.01111	0.01171	0.01230	0.01289	0.01347	0.01405	
26.0	0.00749	0.00862	0.00924	0.00986	0.01047	0.01107	0.01167	0.01226	0.01284	0.01342	0.01400	
28.0	0.60198	0.00859	0.00921	0.00982	0.01043	0.01103	0.01163	0.01222	0.01260	0.01338	0.01395	
30.0	C.00794	9-90856	0.00918	0.00979	0.01040	0.01100	0.61160	0.01218	0.01277	0.01334	0.01392	

(b) Index increase with pressure and wavelength, applicable at all temperatures.

and the contraction of the contr

λ	_	_					a ( <sup>2</sup> )			AI	1 Tempe	Pratures
( <del>~~</del> )	0.0	50.0	100.0	150.0	200.0	250.0	(kg/cm²) 300.0	350.0	400.0	450.0	500.0	550.0
400	0.00000	0.60501	0.00002	0.00003	0.00003	0.00004	0.00005	0.00006	0.00007	0.00008	0.,00009	0.00010
420	0.00000	0.0000;	9-00002	0.00002	0.00003	0.00004	0.00004	0.00005	0.00006	0.90007	0.00007	0.00008
440	0.00000	0.00001	0.00001	0.00002	0.00202	0.00003	0.00004	0.00004	0.00005	0.00005	0.00006	0.00007
460	0.00000	0.00001	0.00001	0.00002	0.00002	0.00002	0.00003	0.00003	0.00004	0.00004	0.02005	0.00005
460	0.00000	0.00001	£.00001	0.00001	0.00061	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00004
100	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00001	0.00001	2.0002	0.00002	0.00002	0.00002
520	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.60000	0.00001	0.00001	0.00001	0.00001
540	0.00000	0.00000	0-00000	0.00000	0.00000	0.00000	0.00000	-0.00001	-0.00001	-0.00001	-0.00001	-0.00001
560	0.00000	0.00000	0.00000	-0.00001	-0.00001	-0.00001	-0.00001	-0.00001	-0.00002	-0.00002	-0.00002	-0.00002
580	0.00000	0.00060	-0.30001	-0.00001	-0.00001	-0.00002	-0.00302	-0.00002	-0.00003	-0.00003	-0.00003	-0.00004
600	0.00000	-0.000001	-0.00001	-0.00002	-0.00002	-0.00002	-0.00003	-0.00003	-0.00004	-0.00004	-0.00005	-0.00005
620					-0.00003							
640	0.00000	-0.00001	-0.00002	-0.00002	-0.00003	-0.00004	-0.00005	-0.00005	-0.00006	-0.00007	-0.00007	-0.00008
660	0.00000	-0.00001	-0.00002	-0.00003	-0.00004	-0.00005	-0.00005	-0.00006	-0.00007	-0.00008	-0.00009	-0.0000°
680					-0.00004							
700	0.00000	-0.00001	-0-00003	-0.00003	-0.00005	-0.00006	-0.00007	-0.00008	-0.00009	-0.00010	-0.00011	-0.00012
	600.0	650.C	100.0	750.0	800.0	850.0	900.0	950.0	1000.0	1050.0	1100.0	
400	0.00011	0.00011	0.00012	0.00013	0.00014	0.00015	4.00015	0.00016	0.00016	0.00017	U.000'7	
420	0.00009	0.00010	0.00610	0.00011	0.00012	0.00012	0.00013	0.00013	0.0001	0.00014	0.00014	
440	0.00007	0.00006	0.00006	0.00009	0.00010	0.00010	0.00010	0.00011	0.00011	0.00011	0.07.012	
460	0.00006	0.00006	0.00007	0.60007	0.00007	0.0000#	0.00008	0.00008	0.00009	0.00009	0.00009	
480	0.00004	0.00004	0.00005	0.00005	0.00005	0.0000>	0.00006	0.00006	0.00004	0.00006	0.00004	
500	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	
520	0.00001	0.00001	0.00001	0.00201	0.00001	0.00001	0.20001	0.00001	0.00001	0.00001	0.20000	
540	~0.00001	-0.00001	-0.00001	-0.00001	-0.00001	-0.20001	-0.00001	-0.00002	-0.00002	0.30032	-6.50002	
560	-0.00002	-0.00002	-0.00003	-0.00003	~0.00003	-0.00003	-0.00004	-0.00004	-0.00004	-0.00005	-0.00005	
580					-0.00005							
600	~0.00005	-0.00006	-0.00006	-0.00007	-0.00007	-0.00008	-0.00008	-0.06009	-0.00010	-0.00010	-0.00011	
620					-0.00009							
<b>640</b>					-0.00011							
660	-0.00010	-0.00011	-0.00012	-0.00013	-0.00014	-0.00014	-0.00015	-0.00016	-0.00017	-0.00018	-0.00019	
660	-0.00012	-0.00013	-0.00014	-0.00015	-0.00016	-0.00017	-0.00016	-0.00019	-0.00020	-0.00021	-0.00022	
700	-0.00013	-0.00014	-0.00013	-0.00017	-0.00018	-0.00019	-0.00020	-0.00021	-0.00022	-0.00023	-0.00025	

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## TABLE A-6 (a.b)

High Pressures S = 0% (pure water only)

This table is based on the data of Waxler, Weir and Schamp (1964). The analysis of this body of data was presented in Subsection 4.4, and the resulting table which we have adopted is given as Table 4-12 in the text. Pincludes the following values of the variables:

Wavelength: 467.8, 480.0, 492.2, 501.6, 587.6, 643.8, 867.8 nm

Pressure: 0, 250, 500, 750, 1100 kg/cm<sup>2</sup>

Temperature: 1.56, 7.64, 24.80, 34.50, 54.34°C

Tables A-6(a,b) represent the increment of index with pressure and are sequentially additive to Tables A-1 through A-4 to provide the pressure, temperature, and wavelength dependence of the index of refraction (with respect to air) of pure water, S = 0%. They are accurate to within  $\pm 10 \times 10^{-5}$ .

Table A-6(a): holds for any wavelength (it is exact only for 540 nm) providing an additive increment for various values of pressure and temperature.

Table A-6(b): holds for any temperature and provides additive increments for various wavelengths and pressures, thus offering a wavelength correction to Table A-6(a).

To use these tables, first read Tables A-1, A-2, A-3, or A-4(a) for the desired wavelength and tomperature (at atmospheric pressure) for  $S = 0\%_{00}$ ; then add the factor given in Table A-6(a) and then add algebraically that given in Table A-6(b).

The increments in pressure, temperature, and wavelength are identical to those in Tables A-5(a,b).

Table A-6. INDEX OF REFRACTION OF PURE WATER Index increments due to Pressure -- Salinity = 0%

Tables (a) and (b) are not independent. They are both additive to the ath papheric pressure index values.

(a) Index increase with pressure and temperature, applicable at all wavelengths.

TEMP			·-		9921	SURES (I	·-/3}			Al	Wave	ongths
°C	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	400.0	450.0	500.0	550.0
0.0	0.00060	0.000#6	0.00159	0.00237	0.00314	0.00390	0.00400	0.00540	0.00614	0.00487	0.00758	0.00629
2.0	0.00000	0.00078	0.00156	0.00232	0.00308	0.00384	0.00459	0.00533	0.00606	0.00679	0.06751	0.00623
4.0	0.00000	0.00077	0.00152	0.00228	0.00303	0.00378	0.00452	0.00526	0.00599	U.00672	9.00744	0.00614
6.0	0.00000	0.00075	0.00150	0.00224	0.00298	0.00372	0.00446	0.00520	0.00593	0.00665	0.00734	0.00810
8.0	0.00000	0.00074	0.00148	0.00721	0.00295	0.00308	0.00441	0.00514	0.00587	0.00659	0.00732	0.00003
10.0	0.00000	0.00073	0.90146	0.00219	0.00291	0.00364	0.00437	0.00509	0.00581	0.00654	0.06726	0.00797
12.0	0.00000	0.00072	0.00144	0.00216	0.03266	0.00360	0.00432	0.00504	0.20576	0.0048	0.00720	0.00791
14.6	0.00000	0.00071	0.00143	0.00214	0.00285	0.003>7	0.0042#	0.00>00	0.00571	0.00643	0.00714	0.00785
16.0	0,00000	0.00071	0.00141	0.06212	0.002 83	0.00353	0.00424	0.00445	0.00567	0.00638	0.00709	0.00779
16.0	0.00000	0.00070	0-00140	0.00210	0.00280	0.00350	0.00421	0.00492	0.00563	0.00433	0.00704	U.00773
20.0	0.00000	0.00369	0.00139	0.00208	0.00278	0.00548	0.604.6	9.00484	0.00554	0.00629	0.00699	0.00747
22.0	0.00000	0.00069	0.00138	0.00207	0.00276	0.00345	0.00415	0.00485	0.00555	0.00625	0.00694	0.00761
24.0	0.00000	0.00069	0.00137	0.00200	0.00275	0.00344	0.00413	0.00482	0.00551	0.00620	0.00689	0.00754
26.0	0.00000	0.00049	0.00137	0.00205	0.00274	0.00342	0.00411	0.00479	0.00548	0.00616	0.00685	0.00751
28.0	0.00000	0.00068	0.00137	0.00205	0.00273	0.00341	0.00409	0.00477	0.00545	0.00413	0.00481	0.00747
10.U	0.00000	0.00068	0.00136	0.00204	0.00272	0.00340	0.00408	0.00474	0.00543	0.00611	0.00677	0.00743
	600.0	650.0	10%.0	750.0	0.008	850.0	900.0	450.0	1000.0	1050.0	1100.0	
0.0	0.00400	0.00970	0.0103#	0.0110/	0.01174	0.01242	0.01309	0.01375	0.01441	0.01506	0.01571	
2.0	0.00893	0.00963	0.01032	0.01100	9.01167	C.01713	0.01298	0.01362	0.01425	0.014#8	0.01550	
4.0	0.00887	0.00956	0.01025	0.01092	0.61158	0.01225	0.01207	0.01349	0.01410	0.01470	0.01529	
6.0	0.00840	0.00949	0.01017	0.01084	0.01150	0.01714	0.01/70	0.01337	0.01396	0.014.5	0.01512	
8.0	0.00873	0.00942	0.01010	0.01076	0.01142	0.01205	0.01267	0.01 327	0.01386	0.01443	0.01500	
10.0	0.00867	0.00935	0-01002	0.01048	0.01133	0.01196	0.01257	0.01317	0.01376	0.01433	0.01490	
12.0	0.00860	0.00928	0.00994	0.01059	0.01174	0.01106	0.0124N	0.01307	0.01364	0.01474	11-01480	
14.0	0.06453	0.00920	0.00986	0.01050	G.01114	0.01176	0.01247	0.01297	0.01354	0.01414	0.01471	
16.0	0.00846	0.00912	0.00977	0.01041	0.01104	0.01166	0.01227	0.01247	0.01346	0.014114	0.01-62	
12.6	0.00840	C.00905	0.00969	0.01032	0.01094	0.01150	0.01/17	0.01277	0.01337	0.01395	0.01453	
20.0	0.00833	0.00897	0.00960	0.01023	6.010#5	C.01146	G.01707	0.01267	0.01327	0.01386	0.01444	
22.0	0.00827	0.00890	0.00952	0.01014	0.01076	0.01147	0.01198	0.01758	0.01314	0.01377	0.01435	
24.0	0.00821	0.00883	0.00945	0.01006	0.0 600	0.01128	0.01189	0.01249	0.01309	U.0135#	0.01427	
26.0	0.00515	0.00877	0.03938	0.00999	0.0,059	0.01120	0.01160	0.01240	0.01300	0.01360	0.01418	
70.0	0.00810	0.00872	0.00932	0.00993	0.01653	0.01113	0.01173	0.01233	0.01293	0.01352	0.01410	
30.0	0.00806	0.00867	0.00925	0.00988	0.01046	0.01109	0.01168	0.01227	48710.0	0.01344	0.01407	

(b) Index increase with pressure and wavelength, applicable at all temperatures.

λ	PRESSURES (kg/cm²) All Temperatus											
(nm)	·	>0.0	100.0	150 0	200.0	250.0	300.0	35C.O	400.0	450.0	500.0	550.0
400.0	0.00000	0.00001	0.00002	0.00003	0.00004	0.0000>	0.00006	0.00004	0.00007	0.00008	0.00008	0.00009
420.0	9.00000	0.00001	9.00002	0.00002	0.00003	0.00004	G.00004	0.00005	0.00006	0.00006	0.00007	0.00004
440.0	0.60000	0.00000	0.00001	0.00001	0.00002	0.00003	0.00003	0.00004	0.00005	0.00005	0.00006	0.00007
440.0	0.00000	0.00000	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00004	0.00004	0.00005	0.00005
480.0	9.00000	0.0000	9.00000	0.00061	0.00001	0.00001	0.00002	0.00002	0.00003	0.06003	0.00004	0.00004
500.0	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00001	0.00002	C.00002	0.,00002	0.00003	0.00003
520.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.20061	0.00001	0.00001	0.00002
540.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.30000	0.00000	0.00000	0.00000
550.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.00001	-0.00UC1	1000001	-0.00001	-0.00001
580.0	9.00000	0.00000	0.00000	0.00000	-0.00001	-0.00001	-0.00001	-C.00001	-0.000012	-0.00002	-0.00002	-0.00002
500.0	0.00000	0.00000	G_00000	-0.00061	-0.00001	-0.00061	-0.00002	-0.00002	-0.00002	-0.00003	-0.00003	-0.00004
A21 .G	0.00000	0.00000	0.00000	-0.00001	-0.000C1	-0.00001	~0.00002	-0.00003	-0.00003	-0.00004	-0.0000	-0.00005
A40.6	0.00000	0.00000	0.00000	-0.000-1	-0.0001	-0.00002	-0.00003	-6.00003	-0.00004	-0.00005	-0.00006	-0.00006
0.044	• 00000	0.00000	-0.00001	1000001	-0.00002	-0.00002	-0.0000;	-0.00004	-0.00005	-0.00006	-0.00007	-0.00007
M40.0	0.60000	0.9.000	-0.00001	130001	-6.00002	-0.00003	-0.00004	-0.00005	-0.00COA	-0.00007	-0.00008	-0.00009
700 •	0.00000	0.00000	-0.00001	-0.00003	-0.00012	-0.00003	-C.00004	-0.00006	-0.00007	-0.00001	-0.00009	-0.00010
	600.0	650.0	700.0	75 .0	G. 00 B	850.0	900.0	950.0	1000.0	1050.0	1100.0	
400.0	0,000.0	0.00010	0.00011	0.00012	0.00013	0.00013	0.00014	0.00615	0.00616	0.00017	0.9001#	
426.0	0.00008	6.00009	0.00010	0.00010	0.00011	0.60011	0.00012	0.00013	0.00014	0.00014	0.00015	
-40.U	0.00007	0.12007	0.00008	0.00003	0.00004	0.00010	0.00016	0.00611	0.00611	0.00012	0.00013	
440.0	0.00006	0.00006	0.00006	0.00007	0.00007	0.00006	0.00008	0.00009	0.00009	0.00010	0.00010	
480.0	0.00004	0.00005	0.05005	0.00005	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00008	
500.0	0.00003	0.00003	0.00003	0.00004	0.00004	0.0000*	0.00004	0.00005	0.00005	0.00005	0.00005	
425.0	0.00003	0.0000		^,^^^	^.^;	• • • • • • • • • • • • • • • • • • • •			د ټونونۍ د	ذىرىنى د	0.00003	
540.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
560.0	-0.00001	-0.00001	-0.00001	-0.00001	-0.00001	-0.00002	-0.00002	-0.00002	-0.00002	-0.00002	-0.00003	
5#C+0	-0.00002	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00004	-0.00004	-0.00004	-0.00004	-C.00004	
AC7.0	-0.00004	-0.00004	-0.00664	-0.00005	-0.00005	-0.00005	-0.00006	-0.00006	-0.00006	-0.00007	-0.00007	
420.C	-0.00005	-0.00006	-0.00006	-0.00006	-0.00007	-0.00007	-0.00008	-0.00008	-0.00008	-0.000 9	-0.00009	
							-0.00010					
							-0.00012					
640.0	-0.00009	-0.00010	-0.00011	-0.00011	-0.00012	-0.00013	-0.00014	-0.00014	-0.00015	-0.00016	-0.00017	
700.0	-0.00011	-0.00011	-0.00012	-0.000:3	-0.00014	-0.00015	-0.00016	-0.00016	-0.00017	-0.0001#	-0.00019	

## APPENDIX B. THE INTERPOLATION ROUTINE

The computer routine used to interpolate the original data tables to produce the tables in Appendix A was taken from the published literature, At line (1972).

It is neither a curve-fitting routine employing an analytical approximation now a least squares method, but is instead a numerical technique utilizing the local derivatives obtained from the input data and functions only on monotonic data. Its great advantage lies in its ability to pass a curve through a given set of data points and interpolate between the points as smoothly as would be possible.

We have tested this routine empirically by numerically computing several points from analytic expressions (polynomials) and asking the routine to interpolate for several values between these points. The estimates were checked against the polynomial and were found to be in excellent agreement. The polynomials used for testing simulated situations actually encountered with our data tables. Thus, we have confidence in using this scheme to provide interpolated values that pussess the same accuracy as the original data.

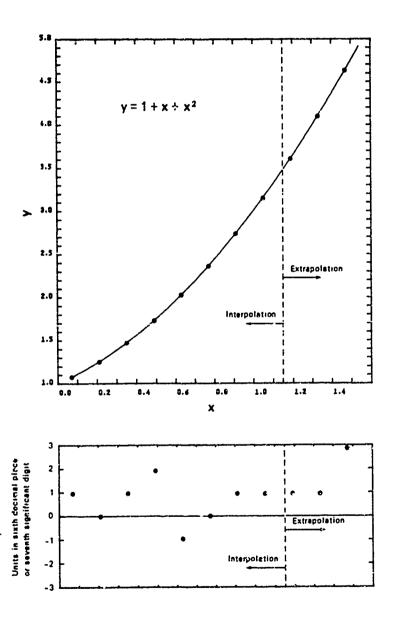
This interpolation routine also greatly assisted us in determining the smoothness of the original data, since it actually passes a curve through the data points, helping to detect inflection points on the plots.

Of course, the fact that our data were mostly well-behaved, being values for a physical parameter measured to a high accuracy, greatly helped in achieving our goals.

When extrapolation was performed, we found that in some instances the estimates deviated somewhat from the corresponding polynomial, depending on the type of curve shape used. However, this routine was not used for extrapolations.

An illustrative example of the capabilities of this numerical procedure is provided in the figure given below. In the upper graph the continuous curve represents the polynomial  $y = 1 + x + x^2$ . As input, pairs of x,y values computed from the equation were supplied, whose position on the curve lies halfway between the circled points, on the 'interpolation' side only. The subroutine then estimated a series of y values corresponding to given x values in both the 'interpolation' and 'Extrapolation' regions. These estimates are marked by the circled points on the curve in the upper graph. The differences between these estimates and the true values from the polynomial are plotted in the lower graph. These differences were

found to be of the order of two units in the seventh significant digit, with no apparent change from the 'Interpolation' to the 'Extrapolation' region. All the numerical work was performed on an IBM 360/44 computer which employs seven significant digits. Thus in the index of refraction tables small discrepancies would arise in the sixth decimal place, but since we have presented the tables to the fifth decimal place only, we believe that no real numerical problems arise in interpolating.



and the contract of the second 
The actual computer code of the interpolation routine is reproduced below in FORTRAN, as adapted to the IBM 360/44 computer, because we believe this routine should receive wider circulation. For more details and description refer to Akima (1972).

```
SUBROUTINE INTRPL(IU, L, X, Y2 N, U, V'
       INTERPOLATION OF A SINGLE-VALUED FUNCTION
C
0000
       THIS SUBROUTINE INTERPULATES, FROM VALUES OF THE FUNCTION GIVEN
       AS ORDINATES OF INPUT DATA PUINTS IN AN X-Y PLANE AND FOR A GIVEN SET OF X VALUES (ABSCISSAS). THE VALUES OF A SINGLE-VALUED
C
       FUNCTION Y = Y(X).
C
C
       THE INPUT PARAMETERS ARE
C
         IU = LOGICAL UNIT NUMBER OF STANDARD OUTPUT UNIT
          L . NUMBER OF INPUT DATA POINTS (MUST BE 2 UR GREATER)
С
               ARRAY UF DIMENSION L STORING THE X VALUES (ABSCISSAS) UF
               INPUT DATA POINTS (IN ASCENDING URDER)
C
              ARRAY OF DIMENSION L STORING THE Y VALUES (URDINATES) UP
               INPUT DATA POINTS
          N = NUMBER OF POINTS AT WHICH INTERPULATION OF THE Y VALUE (ORDINATE) IS DESIRED (MUST BE 1 OR GREATER)
U = ARRAY OF DIMENSION N STURING THE X VALUES (ABSCISSAS) OF
C
č
C
               DESIRED POINTS
       THE OUTPUT PARAMETER IS
C
           V = ARRAY OF DIHENSION & WHERE THE INTERPOLATED Y VALUES
               (ORDINATES) ARE TO BE DISPLAYED
       DECLARATION STATEMENTS
       DIMENSION X(L),Y(L),U(N),V(N)
       EQUIVALENCE (PO, X3), (UO, Y3), (U1, T3)
       REAL M1, M2, M3, 114, M5
       EQUIVALENCE (UK, DX), (InN, X2, A1, H1), (IHX, X5, A5, H5),
      1 (J, SH, SA), (Y2<42+84,02), (Y5+83,03)
C
       PRELIMINARY PRUCESSING
    10 LC = L
       Lm1 = L0-1
       LH2 = LH1-1
       LP1 = L0+1
       NO = N
       IF(L:12.LT.0) GU TU 90
       1F(NO.LE.O) GU TU 91
       UO 11 I=2,LO
         IF(X(1-1)-X(1)) 11,9>,96
    11 CONTINUE
       IPV = 0
       MAIN DO-LUGP
       DO 80 K=1.NO
         UK = U\{K\}
       ROUTINE TO LOCATE THE DESIRED POINT
    20 IF(LM2.EQ.O) GO TO 27
       IF(UK.GE.X(LO))GU TO 26
       IF(UK.LT.X(1)) GO TO 25
       IMN = 2
       IMX = LO
    21 I = (IMN+IdX)/2
       IF(UK.GE.X(I))GU TO 23
    22 IMX = I
       60 TO 24
    23 \text{ IMN} = 1+1
    24 IF(IMX.GT.IMN) GO TU 21
        I = IMX
       GO TO 30
    25 I = 1
       GO TO 30
    26 I = LP1
```

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To see the control of 
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GO TO 30
   27 1 = 2
      CHECK IF I = IPV
C
   30 IF(I.EQ. IPV) GU TO 70
       IPV = I
C
      ROUTINES TO PICK UP NECESSARY X AND Y VALUES AND TO ESTIMATE THEM
C
      IF NECESSARY
   40 J = I
      IF(J.EQ.1) J=2
       IF(J.EQ.LP1) J=LO
       X3 = X(J-1)
       Y3 = Y(J-1)
      X4 = X\{J\}

Y4 = Y\{J\}
       A3 × X4-X3
       M3 = (Y4-Y3)/A3
       IF(LM2.EQ.0) GO TO 43
       IF!J.EQ.2) GO TO 41
      X2 = X(J-2)
Y2 = Y(J-2)
       A2 = X3-X2
       M2 = (Y3-Y2)/A2
       IF(J.EO.LO) GO TO 42
   41 \times 5 = \times (J+1)
       Y5 = Y(J+1)
       A4 = X5-X4
       M4 = (Y5-Y4)/A4
       IF(J.FQ.2) M2=M3+M3-M4
       GO TO 45
    42 M4 = M3+N3-M2
       GO TO 45
    43 MZ = M3
       M4 = M3
    45 IF(J.LE.3) GO TU 46
       A1 = X2-X(J-3)
       M1 = (Y2-Y(J-3))/A1
       GO TO 47
    46 H1 = M2+H2-M3
    47 IF(J.GE.LH1) GU TO 48
       45 º X(J+2)-X5
       H5 = (Y(J+2)-Y5)/A5
       GO TO 50
    48 m5 = M4+M4-m3
       NUMERICAL DIFFERENTIATION
    50 IF(I.EQ.LP1) GU TU 52
       1.2 = ABS (H4-H3)
       H3 = 485(H2-H1)
       SH = U2+K3
       IF(SW.NE.O.O) GO TO 51
       W2 = 0.5
       K3 = 0.5
       SH = 1.0
    51 T3 = (1:2*M2+H3*H3)/SH
    IF(1. 0.1) GO TO 54
52 Y2 = A05("5 "4)
       K4 = AB$(M3-M2)
       SH = H3+H4
       IF(54.NE.0.0) GU TU 53
       N3 = 0.5
       H4 = 0.5
       SH = 1.0
    53 T4 = (H3*m3+H4*m4)/SH
1F(I.NE.LP1) GU TU 60
       T3 = T4
```

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Non-Alle

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SA = A2+A3
    14 = 0.5+(H4+H5-A2+(A2-A3)+(H2-H3)/(SA+SA))
    X3 \times X4
    Y3 = Y4
    A3 = A2
    3 = H4
    GO TU 60
 54 T4 = T3
    SA = A3+A4
    T3 = 0.5*(M1+M2-A4*(A3-A4)*(M3-M4)/(SA*SA))
    X3 = X3-A4
    Y3 = Y3-M2*A4
    43 = A4
    H3 = H2
    DETERMINATION OF THE COEFFICIENTS
 60 Q2 = (2.0 = (M3 - T3) + M3 - T4)/A3
    Q3 = (-M3-M3+T3+T4)/(A3*A3)
    COMPUTATION OF THE PULYRUNIAL
 70 UX = UK-PO
 80 V(K) = Q0+DX+(Q1+DX+(Q2+DX+G3))
    RETURN
     ERROR EXIT
 90 WRITE(11,2090)
    GO TU 99
 91 WRITE(IU, 2091)
     GO TO 99
 95 WRITE(IU, 2095)
     GO TU 97
  96 WRITE(1U,2096)
  97 URITE(IU, 2097) 1.X(I)
  99 HRITE(1U,2099) LO,40
     RETURN
     FORMAT STATEMENTS
                            L = 1 OR LESS./)
N = 0 OR LESS./)
2090 FURHAT (1X/22H ***
2091 FORMAT (1)/22H ***
2095 FORMAT (1X/27H ***
2096 FORMAT (1X/33H ***
                             IDENTICAL X VALUES./)
                             X VALUES OUT UF SEQUENCE./)
2097 FORMAT (6H I =, 17, 10x, 6HX(I) =, E12.6)
2099 FORMAT (6H L = ,17,10X,3Hn = ,17/36H ERRUR DETECTED IN KOUTINE
    1 INTRPL)
     END
```